TOSHIBA HDD/DVD VIDEO RECORDER **RD-XS24SB**

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DVD RAM RAM4.7 · DVD R/RW · DVD VIDEO · COMPACT disc DIGITAL VIDEO · COMPACT disc DIGITAL AUDIO

HDD/DVD VIDEO RECORDER
RD-XS24SB

OWNER'S MANUAL

QSOUND · DOLBY DIGITAL STEREO CREATOR · dts DIGITAL OUT

Introduction
Recording
Playback
Editing
Function setup
Others

OPERATIONS

Read "INSTALLATION GUIDE" first.

TOSHIBA

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Caution for safety

Read “SAFETY PRECAUTIONS”, “IMPORTANT SAFETY INSTRUCTIONS”, “Precautions” and others of the “INSTALLATION GUIDE” first.

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About this product

Some differences

This DVD recorder is more similar to a computer than it is to a standard DVD player. In addition to a microprocessor, it contains a hard disc drive (an HDD), an operating system, random access memory (RAM), and a DVD-RAM/R/RW drive. The operating system includes software stored on the HDD that is transferred to the RAM when the machine is turned on and at other times during operation. This transfer can take time. Thus, when you turn on the DVD recorder, it may be a minute or so before it is ready to use. Likewise, other functions may not be performed as quickly as they would on other AV equipment. In addition, because programs stored on the DVD-RAM/R/RW drive cannot be accessed as quickly as those stored on the HDD, accessing those programs (or deleting a program from a DVD-RAM or DVD-RW disc) may take more time. Please take these factors into consideration as you use the DVD recorder.

About the hard disc drive (HDD)

Like any HDD, the HDD in the DVD recorder is a fragile device that is susceptible to partial or complete failure if it is jarred or as a result of use over time. It will not last forever. Therefore, do not use the HDD for longer term storage of programs you wish to retain. [If portions of the HDD become damaged, programs recorded on those portions may exhibit pixelization or block noise when played back. Repeated playback of the program may cause the problem to get worse and, eventually, the program may become unplayable. Accordingly, if you notice such noise in a program that you want to save, you should transfer to a recordable DVD disc as soon as possible.] Recordable DVD discs are also susceptible to damage if not handled and stored carefully and some or all of the programs on them may become unplayable. You can reduce these risks by using high quality DVD recordable discs and checking their playability from time to time. If it becomes necessary to service your DVD recorder, it may be necessary to delete some or all of the programs on the HDD.

Playback Restrictions

This owner's manual explains the basic instructions for this recorder. Some DVD video discs are produced in a manner that allows specific or limited operation during playback. As such, the recorder may not respond to all operating commands. This is not a defect in the recorder. Please refer to the notes on compatible discs later in this Introduction and to the discussion of DVD playback and features later in this manual.

"⃠" may appear on the TV screen during operation.
"⃠" means that the operation is not permitted by the recorder or the disc.

Recording Restrictions

Copy-protected contents of DVD-Video disc, VIDEO CDs or audio CDs on the market cannot be copied on this recorder.
Contents without copy protection should be copied or edited only in accordance with applicable copyright laws, which may restrict copying or editing. Contents that permit single copying (copy once contents) can be recorded onto the HDD or a CPRM compatible DVD-RAM, DVD-RW (VR mode) or DVD-R (VR mode). They cannot be recorded onto a DVD-RW (Video mode) or DVD-R (Video mode). Copy once contents recorded in the HDD can be moved to a CPRM compatible DVD-RAM, DVD-RW or DVD-R, with some dubbing and editing restrictions.

Compatibility

In isolated cases, a disc bearing the DVD or CD logo may not fully and properly play back all features. This can be due, among other reasons, to problems and errors that can occur during the creation or recording of DVD and other software and the manufacture of software discs (including blank discs). Moreover, because of variations in the quality of discs, this recorder may not be able to record on all discs that bear a DVD-RAM, DVD-R or DVD-RW logo, but you should not encounter difficulty if you use only high quality recordable DVD discs.

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Compatible discs

When you want to play DVD or CD software or copy programmes from the HDD to a recordable DVD, load an appropriate disc into the recorder. There are many types and formats of discs. Please use the following information to select an appropriate disc.

Notes

- Handle the disc according to the disc instruction manual.
- Depending on the data recording method or the disc status, playback or recording on this recorder may not be possible, even if the disc is labeled as below. Toshiba cannot assure that all discs bearing the DVD or CD logos will operate as expected. Please see the discussion of compatibility on page 5.

For recording / playback

Disc	Mark	Specification	Recording format	Copy once contents
HDD		160GB	VR mode	Recordable
DVD-RAM	DVD RAM RAM4.7	• Single sided 4.7GB (12cm (4 3/4 in.)) • Double sided 9.4GB (12cm (4 3/4 in.))	VR mode	Recordable (CPRM compatible disc only)
DVD-RW	DVD RW	• Ver. 1.1 or later (12cm (4 3/4 in.))	VR mode	Recordable (CPRM compatible disc only)
			Video mode	Not recordable
DVD-R	DVD R R4.7	• 4.7GB For General Ver.2.0 (12cm (4 3/4 in.))	VR mode	Recordable (CPRM compatible disc only)
			Video mode	Not recordable

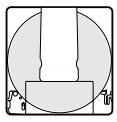
On DVD-RAM discs

■ Use only DVD-RAM discs that comply with DVD-RAM standard Version 2.0, 2.1 or 2.2.

The recorder cannot record on a disc formatted in any other standard. When using such a disc, initialize it by using the disc-format function of this recorder.

- The recorder may not record, dub, or edit some DVD-RAM discs, because they are edited/recorded with another manufacture's equipment or PC, contain a large number of titles, or have little remaining capacity. Also, a DVD-RAM disc may not be edited or recorded if its title contains still pictures.
- DVD-RAM discs formatted in UDF2.0 on a PC are not compatible with this recorder. Before using these discs, initialize them on this recorder.
- Select a DVD-RAM disc that shows a statement on its package such as "this disc can be used with video recorders and drives compatible with 4.7GB DVD-RAM discs" or "this disc can copy images that permit single copying." This recorder complies with current copyright protection technology and can copy a disc only when the disc permits copying once. When there is no indication on the disc, copying will not be allowed.

■ DVD-RAM discs with cartridges are recommended for recording.



- Two types of DVD-RAM discs are available: ones with cartridges and ones without cartridges. You can use either of them with this recorder, but the former ones are recommended.
- In order to record highly detailed data, make sure the disc is clean. DVD-RAM discs with cartridges are easier to handle in this regard.
- Do not open the cartridge shutter. The disc may not play, or may not be recorded or edited once it becomes dirty.
- There are two types of DVD-RAM cartridges; removable (TYPE 2/4) and not removable (TYPE 1). It is recommended you do not remove the disc even when you can.
  Refer to the instruction manual that comes with the disc if it is absolutely necessary to remove the disc.
- Some commercially available cartridge discs cannot be recorded or edited once the inside discs are removed.

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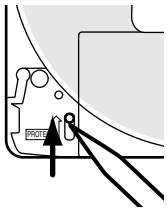
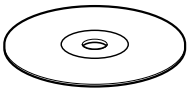
● **To protect recorded contents**
Slide the write-protect tab to "PROTECT" with something small enough. The disc can play, but cannot be edited or erased. Refer to the instructions that come with the disc.



■ **When using a disc without a cartridge (commercially available discs)**



● Discs without cartridges can easily attract fingerprints and dust, which is the reason they are not recommended. If you cannot avoid using them, handle with proper care.
● When you write in a title column on a disc, use a pen with a soft tip. Do not use a pen with a hard tip, such as a ballpoint pen.

Recommended discs
The following discs have been tested with this recorder:
9.4 GB double-sided cartridge: Panasonic 2X, 3X, 5X
4.7 GB single-sided cartridge: Panasonic 2X, 3X, 5X

On DVD-RW discs

■ **Standards**
● Discs labeled DVD-RW Ver.1.1 can be used.
● Discs compatible with 2X speed recording (labeled Ver.1.1/2X etc,) can also be used.
● Select discs labeled "for video," "for recording," "120 min." etc.

■ **Recording conditions**
● Video mode cannot record contents with restrictions on recording (copy once contents). To record such contents, select a CPRM compatible disc and initialize it in VR mode before recording. (You can initialize the disc again either VR mode or Video mode. Initializing erases all contents in the disc.)
If deterioration in writing area on a disc is advanced by repeat erasing and recording, the disc may not be played on other device even if it can be played on this recorder.

■ **Recommended discs***
JVC 2X, 4X

On DVD-R discs

■ **Standards**
● DVD-R for General Ver.2.0 discs can be used for recording and playback.
● Discs compatible with the following recording speeds can also be used:
Ver. 2.0/2X
Ver. 2.0/4X
Ver. 2.0/8X
● Select discs labeled "for video," "for recording," "120 min." etc.

■ **Recording conditions**
● Video mode cannot record contents with restrictions on recording (copy once contents). To record such contents, select a CPRM compatible disc and initialize it in VR mode before recording. (You cannot initialize the disc again from VR mode to Video mode, or vice versa.)

■ **Recommended discs**
That's (Taiyo-Yuden) 4X, 8X

■ **Tested discs**
Panasonic 4X
*Operation has been confirmed with recommended discs and tested discs, but some other discs may not be usable.

- Toshiba is not liable for any damage or loss caused directly or indirectly by the malfunction of this recorder, including, without limitation, any one of the following:
  - Failure to record contents intended to be recorded by the consumer.
  - Failure to edit contents as intended by the consumer.
  - When a DVD-RAM/R/RW disc created on this recorder is used (e.g., insertion, playback, recording or editing) in another DVD player, recorder or personal computer drive.
  - When a DVD-RAM/R/RW disc that is used in the manner described in the immediately preceding bullet point is used again in this recorder.
  - When a DVD-RAM/R/RW disc that was recorded in another DVD recorder, or in a personal computer drive is used in this recorder.
- Discs recorded in this recorder may not operate as expected on other DVD players, recorders or personal computer drives.

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Compatible discs (Continued)

For playback only

Disc	Mark	Specification	Remarks
DVD video disc		• 12cm (4 3/4 in.) / 8cm (3 1/4 in.) • Region number	The region number of this DVD recorder is 2. If region numbers, corresponding to a specific playable area, are printed on your DVD video disc and you do not find or , or the disc is encoded to permit playback only in regions other than Region 2, disc playback will not be allowed by the recorder.
VIDEO CD		• 12cm (4 3/4 in.) / 8cm (3 1/4 in.) • Version 1.1 and 2.0	
Audio CD		• 12cm (4 3/4 in.) / 8cm (3 1/4 in.)	
CD-R **CD-RW**		• 12cm (4 3/4 in.) • CD-DA (audio CD) format	Depending on the disc status, playback may not be possible.

- You cannot play discs other than those listed above.
- You cannot play non-standardized discs even if they may be labeled as above.
- You cannot play discs with specialized encoding (such as SACD discs) or the DVD audio portions of DVD Audio discs.
- You cannot play SVCD discs.
- This recorder uses the PAL colour system for recording and playback. The NTSC colour system is used for playback only, by selecting an appropriate setting. A disc may fail to play, if it has data in the PAL colour system and the NTSC colour system. You cannot add the PAL colour system data to the disc with the data recorded in the NTSC colour system even if they have region marks or .
- There may be some DVD discs designed for this market that cannot be played on this recorder. If you encounter please contact TOSHIBA customer service.
- Toshiba cannot assure that all discs bearing the DVD or CD logos will operate as expected. Please see the discussion of compatibility on page 5.

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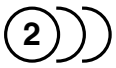
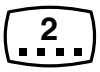
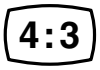
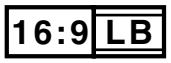
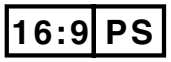
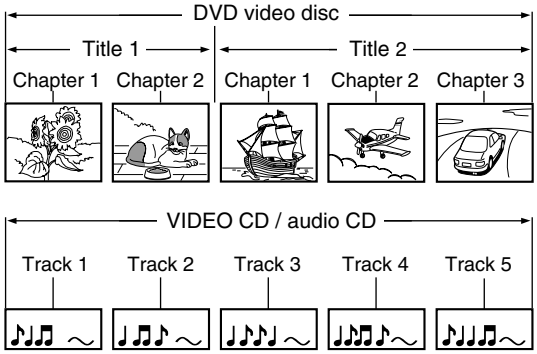
Marks on DVD video discs

The following are examples of marks and the meanings.

Mark	Meanings
	Number of audio streams recorded in the disc. (2 streams such as English and Japanese in this example.)
	Number of subtitle languages recorded in the disc. (2 subtitle languages are recorded in this example.)
	Number of camera angles recorded in the disc. (3 camera angles are recorded in this example.)
	Pictures are recorded in the standard picture shape (4:3 aspect ratio).
	Pictures are recorded in the letter box picture shape (4:3 aspect ratio with horizontal black bars in the top and bottom of pictures).
	Pictures are recorded in the 16:9 wide picture shape. TVs with 4:3 aspect ratio will display them in the letter box style.
	Pictures are recorded in the 16:9 wide picture shape. TVs with 4:3 aspect ratio will display them in the pan scan style (one or both sides of pictures are cut). Actual picture shape may vary depending on the aspect ratio or mode selection of the TV.

Structure of disc contents

Normally, DVD video discs are divided into titles, and the titles are subdivided into chapters.
VIDEO CDs/audio CDs are divided into tracks.



Title: Divided contents of a DVD video disc. Roughly corresponds to a story title in short stories.
Chapter: Divided contents of a title. This corresponds to a chapter in a story.
Track: Divided contents of a VIDEO CD or an audio CD.

Each title, chapter, or track is assigned a number, which is called “title number”, “chapter number”, or “track number” respectively.
Some discs may not have these numbers.

When you record on the HDD or a DVD-RAM disc, one recording will always equal one title. You can divide a title into several chapters by marking borders in it to facilitate scene search.

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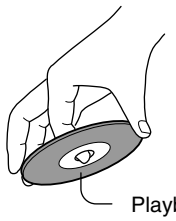
Compatible discs (Continued)

On handling discs

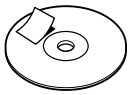
● Do not touch the playback side of the disc.

Yes



● Do not stick paper or tape to discs.

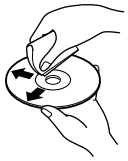
No



On cleaning discs

● Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the center outwards with a soft cloth. Always keep the disc clean.

Yes



No

● Do not use any type of solvent such as thinner, benzine, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.

On storing discs

● Do not store discs in a place subject to direct sunlight or near heat sources.
● Do not store discs in places subject to moisture and dust such as a bathroom or near a humidifier.
● Store discs vertically in a case. Stacking or placing objects on discs outside of their case may cause warping.

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Recording format and disc selection

Disc selection (for the first use of HDD & DVD recorder)

You can use the following 3 types of disc (DVD-RAM, DVD-RW, DVD-R) on this recorder.
Refer to the below to select discs.

Disc	DVD-RAM	DVD-R	DVD-RW
Feature	Rewritable.	Recordable only once.	Rewritable.
Disc capacity	4.7GB/9.4GB	4.7GB	4.7GB
Recommended usage	• Recording/editing in VR mode • Backup of recorded contents	• Creation of a DVD-Video format disc.	• Writing test and creating of a DVD-Video format disc. • Backup of recorded contents
Feature	Can be played and edited on devices such as DVD-RAM compatible DVD recorders. Cartridge of some types will protect disc surface from scratches and dusts.	Can be played on devices such as DVD-R compatible DVD players.	Can be played on devices such as DVD-RW compatible DVD players.

The following disc selection is recommended for the first use.
DVD-RAM / DVD-RW (Video mode) / DVD-R (Video mode)

The following is advanced choice. See the next page.
DVD-RW (VR mode) / DVD-R (VR mode)

■ To save favorite contents - DVD-RAM

Select DVD-RAM. Especially DVD-RAM with cartridge is recommended, as even a double-sided disc is easy to handle, and the cartridge gives the disc higher reservability. Recording restrictions are less on DVD-RAM. Copy once contents can be recorded onto CPRM compatible DVD-RAM.
Please note that DVD-RAM may not be played on other DVD devices such as DVD players. Before playing DVD-RAM on other DVD device, confirm that it is compatible with DVD-RAM.

■ To play on other DVD devices such as DVD players - DVD-R (Video mode)

Select DVD-R (Video mode), as the compatibility is wider.
If you start using a disc without initializing, it records contents in Video mode, which is compatible with other DVD devices such as DVD players.
DVD-R can record only once. Erasing recorded contents is not possible. To play a recorded disc on other DVD devices, finalize it on this recorder.
DVD-R (Video mode) has many recording restrictions, such as prohibition to recording copy once contents. Even a CPRM compatible DVD-R cannot record copy once contents if it is used in Video mode.

■ To try copying before to DVD-R or to play on other DVD devices such as DVD players - DVD-RW (Video mode)

Select DVD-RW (Video mode). You can try copying to test edited contents whether they can be copied to DVD-R. Erasing recorded contents to record others is possible. Also, you can play a recoded disc on other DVD devices such as DVD players.
It may be impossible to play on some DVD devices.
Be sure to initialize a disc in Video mode before using. To play a recoded disc on other DVD devices, finalize it on this recorder. Recording restrictions of copy once contents are the same as DVD-R's.

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VR mode and Video mode

Available operations differ depending on the recording format of discs. Refer to the list below to select a disc and the recording format.

	VR mode (DVD Video recording)	Video mode
Compatible disc	• HDD (Hard Disc) • DVD-RAM (Ver.2.0/2.1/2.2) Erasing and repeat recording is possible. • DVD-RW (Ver.1.1/1.2) (VR mode initialized*1) Erasing and repeat recording is possible. • DVD-R (Ver.2.0) VR mode initialized*2 Once you record contents, you cannot erase them to record others again. (Deleting a title or chapter is possible by the editing function, however the disc space cannot be restored.)	• DVD-RW (Ver.1.1/1.2) (Video mode initialized*1) Erasing and repeat recording is possible. • DVD-R (Ver.2.0) Once you record contents, you cannot erase them to record others again. (When you copy contents from the HDD to a DVD-R (Video mode), be sure to record the contents with "DVD compatible mode" set to "On". Otherwise, there may be some errors in dubbing, such as mixing both sounds of bilingual contents.)
Recorded sound ("DVD compatible mode"*3 selection)	**Both channels of bilingual contents can be recorded.** There are 3 selections to record sound. • "DVD compatible mode" - "Off" Both channels of bilingual broadcast are recorded. You can switch the recorded sound when playing. • "DVD compatible mode" -"On(Mode I)" Only the main sound is recorded. • "DVD compatible mode" -"On(Mode II)" Only the sub sound is recorded.	**Only one channel of bilingual contents can be recorded.** Due to DVD-Video format restriction, only one channel of bilingual contents can be recorded. There are 2 selections to record sound. • "DVD compatible mode" -"On(Mode I)" Only the main sound is recorded. • "DVD compatible mode" -"On(Mode II)" Only the sub sound is recorded. * "Off" is regarded as "On(Mode I)" to record.
Edit function	Editing functions (deleting titles or chapters, dividing into chapters, making a Playlist, etc.) are available.	Editing functions are not available. (Only dividing into chapters while recording is possible.)
Copy once contents	Contents permitted to be recorded only once (Copy once contents) can be recorded. (CPRM compatible disc only)	Contents permitted to be recorded only once (Copy once contents) can not be recorded.
Compatibility with other players	Recorded discs can be played only on DVD players compatible with VR mode of each disc. Disc which contains copy once contents can be played only on DVD players compatible with CPRM.	**Recorded discs can be played only on DVD players compatible with Video mode.** Finalizing a recorded disc on this recorder make it playable on other DVD players. (Some players may not be compatible.)

*1 Before using a new DVD-RW, select the appropriate recording mode to initialize the disc. For initializing, see page 26.

*2 If you use a DVD-R in VR mode, first initialize it in VR mode. Once you initialize a DVD-R, you cannot initialize it again. A DVD-R initialized in VR mode has some restrictions in editing feature. For details, see page 110.

*3 For "DVD compatible mode"˙ selection, see page 28.

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VR mode in DVD-R/RW (advanced use)

VR mode enables you to experience advanced DVD disc function. There are, however, some restrictions on practical use. Therefore, this mode is not suitable for beginners of DVD recorders or users who record onto DVD-R/RW for the purpose of play on other DVD devices.
Read the followings and be sure to confirm the applicability to you, then use this mode.

■ What is VR mode?

VR mode is recording format with less recording restrictions, and can record copy once contents such as digital broadcast programs onto CPRM compatible disc. Recordings onto the HDD or DVD-RAM are on this format. Also on DVD-R/RW this recording format will be available if you initialize it on this recorder. Note that such DVD-R/RW initialized in VR mode can be played only on DVD devices compatible with VR mode of each disc. (It is recommended to finalize the DVD-R/RW when you play it on other devices.)

■ Notes on DVD-R/RW (VR mode)

- To record onto DVD-R/RW in VR mode, be sure to make the disc initializing (logical format) (⇨ page 26) in VR mode before recording.
- If you do not initialize a DVD-R, recording onto the disc will be in Video mode.
- To record copy once contents, select a new disc labeled “CPRM compatible”.
- Even if a disc is labeled “CPRM compatible” or “VR mode recording compatible”, be sure to initialize it before using on this recorder.
- Some DVD-R may be able to be initialized in VR mode, even if they are not labeled “VR mode recording compatible”. There is no guarantee that it functions properly.
- **DVD-R/RW (VR mode) recorded on this recorder can be played only on this recorder or other VR mode compatible devices.**
  If such a disc is loaded on a device which is not compatible with VR mode, damage or malfunction may occur to the disc or the device. Toshiba is not liable for such damage or malfunction.
- **CPRM labeled DVD-R/RW (VR mode) which are recorded on the recorder can be played only on this recorder or other CPRM compatible device. Toshiba is not liable for such damage or malfunction.**
- There is limitation on the number of times of editing contents recorded in DVD-R (VR mode). For details, see ⇨ page 110.

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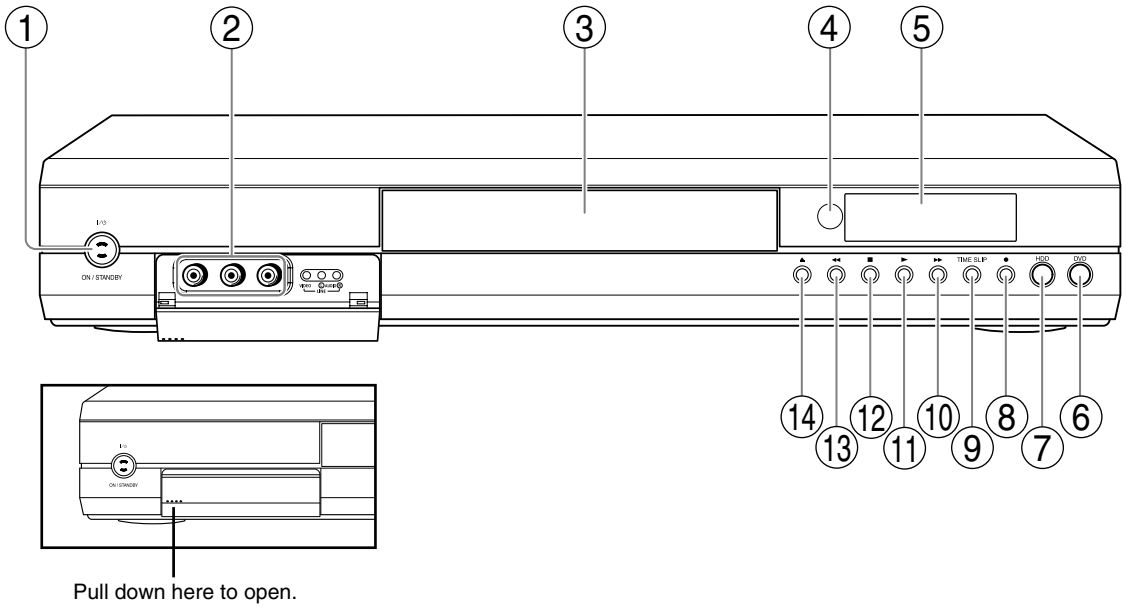
Index to parts and controls

See pages with arrows for details.

Front panel



Note

- Do not place a heavy object on the cover while it is open. Doing so may damage the recorder.

* The above illustration displays the front panel with the cover open. See the following page on how to open or close the cover.

(1) **ON/STANDBY button** ⇨ **pages 20, 21**
Turns the power on/restores the unit in the standby mode.

(2) **LINE jacks** ⇨ **page 39**
Use this when recording from other input source such as a VTR or a camcorder.

(3) **Disc tray** ⇨ **page 20**
Loads a disc into the disc drive.

(4) **Remote sensor** ⇨ **page 12 in "INSTALLATION GUIDE"**

(5) **Front panel display** ⇨ **page 15**

(6) **DVD button** ⇨ **page 37, 46, 56**
Press this to operate a disc inside the disc tray.

(7) **HDD button** ⇨ **page 37, 46**
Press this to operate the HDD.

(8) **● (REC) button** ⇨ **page 37, 40**
Starts recording.

(9) **TIME SLIP button** ⇨ **page 58, 59**
Selects the time slip mode.

(10) **►► (FWD) button** ⇨ **page 48**
Scans the picture forward.

(11) **► (PLAY) button** ⇨ **page 56**
Starts playback.

(12) **■ (STOP) button** ⇨ **page 40, 47**
Stops playback or recording.

(13) **◄◄ (REV) button** ⇨ **page 48**
Scans the picture backwards.

(14) **⏏ (OPEN/CLOSE) button** ⇨ **page 20**
Opens and closes the disc tray.

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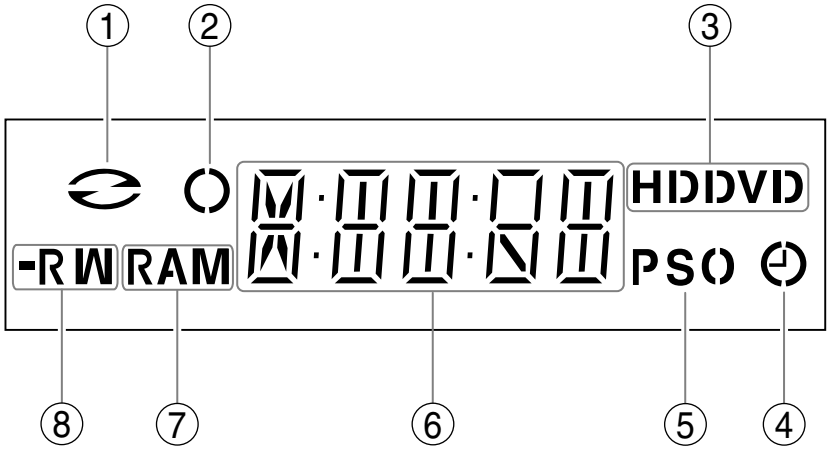
Display



(1) Disc indicator
Illuminates when a disc is loaded.

(2) Recording indicator
Illuminates when recording.

(3) HDD/DVD indicator
Indicates the operating disc drive.
HDD: When the HDD is selected.
DVD: When the DVD drive is selected.

(4) Programme recording indicator
Illuminates when the recorder holds a timer programme.
It keeps illuminating when executing a timer recording.

(5) PSO (Progressive) indicator
Illuminates when video signals are output in the progressive format.

(6) Multi display
Displays the current channel, elapsed time, remaining time, input selection, picture quality mode or some operational status such as playing, etc.
When the power is turned off, it displays the current time.

(7) DVD-RAM indicator
Illuminates when a DVD-RAM disc is loaded.

(8) DVD-R/RW indicator
- R : Illuminates when a DVD-R disc is loaded.
- RW : Illuminates when a DVD-RW disc is loaded.

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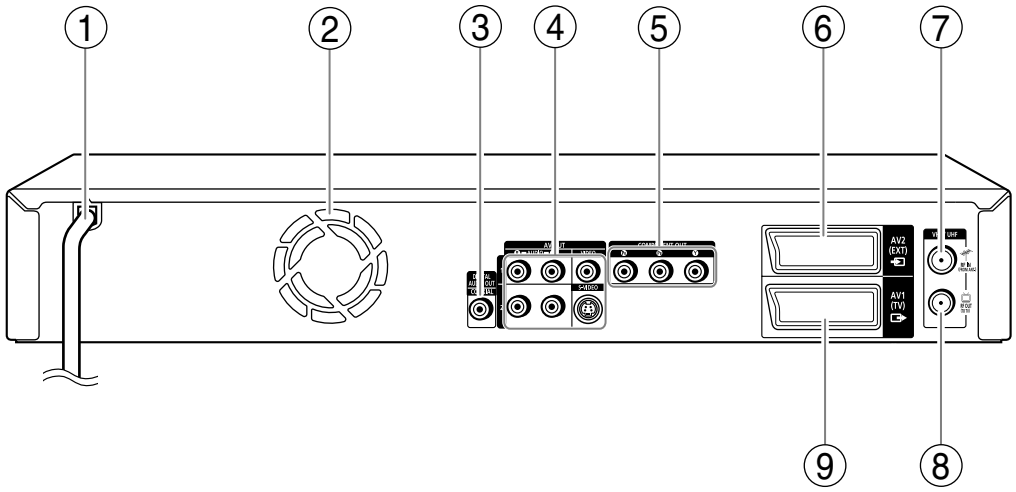
Rear panel



1 Power cord ⇨ page 15 in "INSTALLATION GUIDE"
Connects to a wall outlet.

2 Ventilation fan

3 DIGITAL AUDIO OUT COAXIAL jack ⇨ page 20 in "INSTALLATION GUIDE"
Use this to connect the recorder to an audio receiver equipped with a coaxial digital audio input jack.

4 AV OUT 1, AV OUT 2 jacks ⇨ page 16 in "INSTALLATION GUIDE"
Outputs video and audio signals to a connected TV or amplifier.

5 COMPONENT OUT jacks ⇨ page 17 in "INSTALLATION GUIDE"
Outputs video signals to a connected TV or monitor.
Connects to a TV or monitor equipped with component video jacks.

6 AV2(EXT) socket ⇨ page 39
Use this socket when connecting the video or other equipment that has the terminal in this shape.

7 VHF/UHF RF IN (FROM ANT.) input socket ⇨ page 14 in "INSTALLATION GUIDE"
Connects to an aerial or satellite signal.

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⑧ VHF/UHF RF OUT (TO TV) output socket ⇨ page 14 in "INSTALLATION GUIDE"
Connects the supplied coaxial cable to a TV.

⑨ AV1(TV) socket ⇨ page 39
- Use this socket when connecting the TV that has the terminal in this shape.
- Use this socket when connecting the video or other equipment that has the terminal in this shape.

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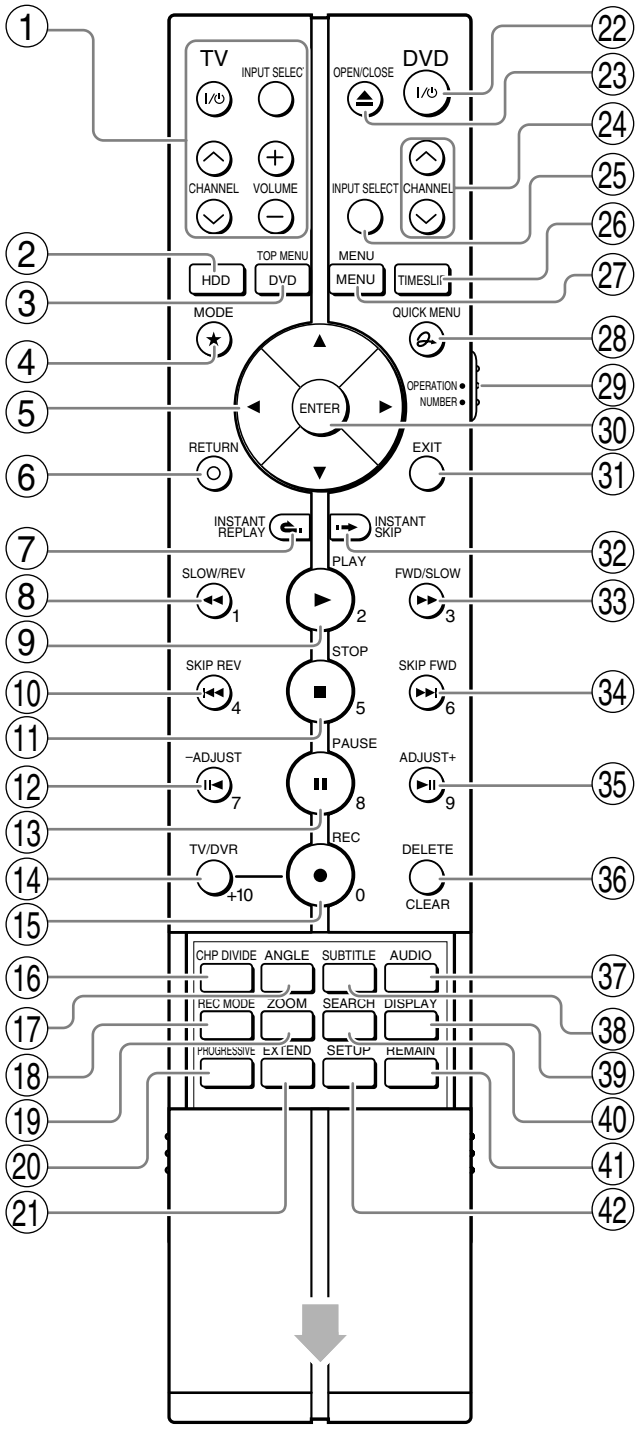
Remote control



Slide to open.

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(1) Buttons for TV operation ⇨ page 38 in "INSTALLATION GUIDE"
(2) HDD button ⇨ page 37, 46
(3) DVD button ⇨ page 37, 46, 56
(4) MODE button ⇨ page 46
(5) Direction buttons (▲/▼/◄/►) ⇨ page 46, 114
(6) RETURN button*2
(7) INSTANT REPLAY button ⇨ page 47
(8) SLOW/REV button ⇨ page 48
(9) PLAY button ⇨ page 56
(10) SKIP REV button ⇨ page 46, 48
(11) STOP button ⇨ page 40, 47
(12) ADJUST (–) button ⇨ page 30, 48
(13) PAUSE button ⇨ page 38, 47
(14) TV/DVR button ⇨ page 38
(15) REC button ⇨ page 37
(16) CHP DIVIDE button ⇨ page 77
(17) ANGLE button ⇨ page 57
(18) REC MODE button ⇨ page 29
(19) ZOOM button ⇨ page 60
(20) PROGRESSIVE button ⇨ page 17 in "INSTALLATION GUIDE"
(21) EXTEND button ⇨ page 36
(22) DVD ON/STANDBY button ⇨ page 20, 21
(23) OPEN/CLOSE button ⇨ page 20, 21
(24) CHANNEL buttons ⇨ page 20, 37
(25) INPUT SELECT button ⇨ page 40
(26) TIMESLIP button ⇨ page 58, 59
(27) MENU button*1
(28) QUICK MENU button ⇨ page 24, 70
(29) OPERATION/NUMBER switch ⇨ page 23 in "INSTALLATION GUIDE"
(30) ENTER button ⇨ page 46, 114
(31) EXIT button ⇨ page 31
(32) INSTANT SKIP button ⇨ page 47
(33) FWD/SLOW button ⇨ page 48
(34) SKIP FWD button ⇨ page 46, 48
(35) ADJUST (+) button ⇨ page 30, 48
(36) DELETE button ⇨ page 42
(37) AUDIO button ⇨ page 57, 62
(38) SUBTITLE button ⇨ page 57
(39) DISPLAY button ⇨ page 68
(40) SEARCH button ⇨ page 61
(41) REMAIN button ⇨ page 29
(42) SETUP button ⇨ page 114

*1 MENU
Use this to display a menu screen that is recorded on a DVD video disc.
Operate the menu screen as the same manner as "Locating a title using the top menu (⇨ page 56)".
A menu screen is not recorded on some discs.

*2 RETURN
Returns to the previous screen (the screen may be specified depending on the disc).
Refer to the instructions of the disc.

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Before operating this recorder

■ Is your recorder ready?

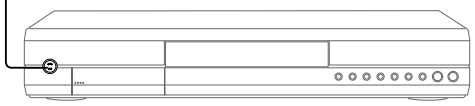
- Refer to the supplied “INSTALLATION GUIDE” manual and finish the necessary preparations.
- Turn on the connected equipment such as a TV or audio system and select the input from the recorder.

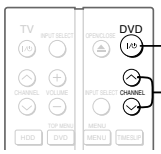
■ Turning the power on

(This owner’s manual instructions are based on the assumption that all proper connections have been completed and the TV is turned on.)

Press ON/STANDBY on the front panel of the recorder or on the remote control.

ON/STANDBY button





ON/STANDBY button

CHANNEL buttons

When the power turns on, the display of the front panel shows “ON”.
After a few seconds, a start-up screen appears.
The following icon appears at the top right corner of the screen.

e.g.

When this icon disappears, the recorder is ready to operate. If the disc drive contains a disc, it takes a little longer to start up.

The display of the front panel changes to the counter. If a disc is not loaded, it shows the current channel.

■ Viewing TV channels through this recorder

After turning the power on, the recorder will output TV channel signals to the connected TV (also in the stop mode).
You can select a desired channel by pressing the CHANNEL or the number buttons.

■ Loading a disc

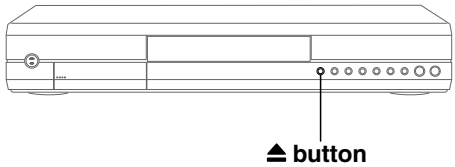
Check disc compatibility beforehand (⇨ page 6) and use a proper playable disc.

Caution

- Keep your fingers well clear of the disc tray. Neglecting this may cause serious personal injury. Keep a close watch on children.
- Do not use a cracked, deformed, or repaired disc.

1 Open the disc tray.

Press ⏏ on the front panel or the OPEN/CLOSE button on the remote control.



⏏ button

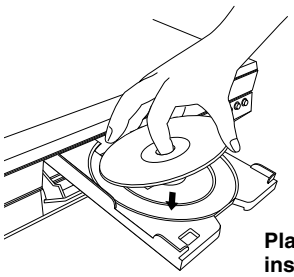
OPEN/CLOSE button

2 Insert a disc.

Disc without a cartridge

Insert with the playback side down.

There are two kinds of disc size. Place a disc to fit the guide. If a disc is out of the guide, it may result in damage to the disc or malfunction.



Place a disc in the inside hollow.

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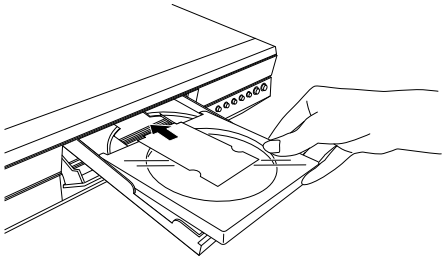
DVD-RAM disc with cartridge (TYPE1/TYPE2/TYPE4)

Single sided

Turn the printed side up, and insert the cartridge into the tray frame following the direction of the arrow on the cartridge.

Double sided

Turn the desired recording/playback side up, and insert the cartridge into the tray frame following the direction of the arrow on the cartridge.



3 Close the disc tray.

Press ⏏ on the front panel or the OPEN/CLOSE button on the remote control.

Notes

- Use the button on the front panel or the remote control to open and close the disc tray. Do not push or hold the disc tray while it is moving. Doing so may cause the recorder to malfunction.
- Do not insert a disc which is unplayable, or any object other than a playable disc.
- Do not apply downforce to the disc tray. Doing so may cause the recorder to malfunction.
- If the disc tray stops while closing, the mechanical protection system of this recorder will open it. Do not force it to close. Doing so may cause malfunction.
- If the disc tray will not open, turn the recorder off, and press the ⏏ button on the front panel or the OPEN/CLOSE button on the remote control. This may turn the recorder on and open the disc tray. If it still won't open, contact your nearest TOSHIBA dealer.

■ Turning the power off

Press ON/STANDBY on the front panel of the recorder or on the remote control.

The "Unloading" icon appears at the top right corner of the screen, and the display of the front panel shows "OFF", then the power turns off (Standby mode.)

Caution

- If the power fails or the power cord is disconnected from a wall outlet while the recorder is in operation, the HDD or a loaded disc may become recording disabled. In such a case, executing an initialization of the disc using the formatting function of the recorder may refresh it. However, all contents stored on the disc will be completely erased by this initialization process.
- This recorder may indicate alert messages with some DVD-RAM discs right after insertion. If such a disc is used for playback or recording on other equipment, all data in the disc may be damaged and the disc will not be played. By executing an initialization of the disc using the formatting function of the recorder, the disc will become operational.
- If the recorder freezes and does not respond at all, leave it alone for about 15 minutes or longer. This may restore the recorder. After the recorder has recovered, turn it off once and turn it on again to use as usual. If the recorder is still inoperable after more than 15 minutes have passed, press and hold the ON/STANDBY button on the front panel for about 10 seconds or longer. The recorder is forced to quit and the power turns off. Turn the recorder on again and use it as usual. (This is an emergency measure, which may cause losses and/or damages of data. Avoid casual use of this measure. If you try this while the recorder is working properly, especially while the "Loading" or "Unloading" icon is flashing, it may result in initializing of the HDD.) (This 15-minute measure is available only when "Screen protector" is set to "On." (⇨ page 120))

Note

- If there are any performance malfunctions of the HDD or the DVD-RAM drive, immediately discontinue use of this recorder, and disconnect the power cord from a wall outlet, then contact your dealer. Continuous use of the recorder in such a condition will aggravate the condition and result in increased cost and repair time.

■ Disc tray lock

You can lock the disc tray.

Press and hold ■ on the front panel or STOP on the remote control for longer than about 3 seconds.

To unlock, during stop press the button for longer than about 3 seconds.

Note

- Turning the power off also unlocks the disc tray.

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■ Start-up/Shutdown (closing) icons

These icons are displayed at the top right corner of the screen when startup or finishing. While they are flashing, the recorder is operating as follows:

Start-up, reading a disc, finishing the recording

Unloading a disc, finishing the operation

Opening a disc tray

Closing a disc tray

■ Status display

Each time you operate the recorder, the following displays appear on the TV screen to indicate the status of the recorder.

Status display

e.g.

Main on-screen displays
(Depending on the disc, some of these may not appear.)

- ▶ : Playback
- ❚❚ : Pause
- ■ : Stop
- ▶▶ : Fast-forward*
- ◀◀ : Fast-reverse*
- ▶▶| : Forward skip
- |◀◀ : Reverse skip
- |▶ x1/2 : Forward slow-motion
- ◀| x1/2 : Reverse slow-motion
- ❚▶ : Forward frame by frame playback
- ◀❚ : Reverse frame by frame playback
- ● : Recording
- ●❚❚ : Recording pause
- Title End : When title playback is completed
- : Instant skip
- : Instant replay
- Chapter Divide : Chapter division
- : Forward skip by 1/20
- : Reverse skip by 1/20

* The number of the mark varies according to the playback speed you select.

Notes

- To disable the status display, set “On screen display” (page 120) to “Off.”
- You can add the current status of the settings to this display. See page 68.

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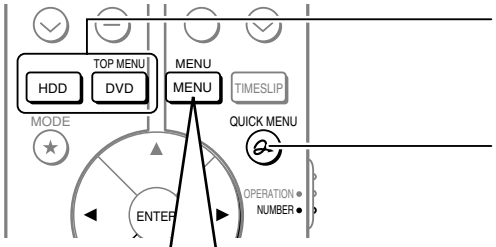
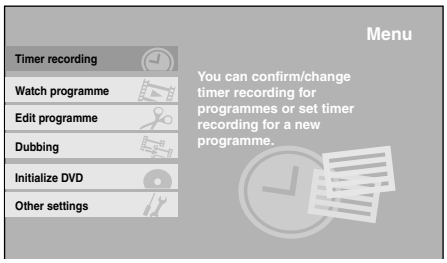
Main function buttons

These buttons are the main gate to various functions of this recorder. Whenever you press any of these buttons, you can get a list or menu of functions to access to the desired one directly.



To select the drive to operate.
The recorded contents are displayed.
(To return to the current TV channel, press the same button again.)

To display Quick Menu, a list of functions which are available in the current mode.
See ⇨ pages 24, 70.



- This menu appears also when the recorder is turned on. If you want to disable this feature, change the setting (⇨ page 120).

Press ▲/▼ to select an item, then press ENTER.

Item	Function	Page
Timer recording	A list of timer programmes appears.	30
Watch programme	Recorded contents are listed in a thumbnail view.	46
Edit programme	A menu of editing functions appears.	82
Dubbing	A menu of dubbing functions appears.	87
Initialize DVD	You can initialize a loaded disc.	26
Other settings	A setup menu appears.	114

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Main function buttons (continued)

■ Quick Menu operation

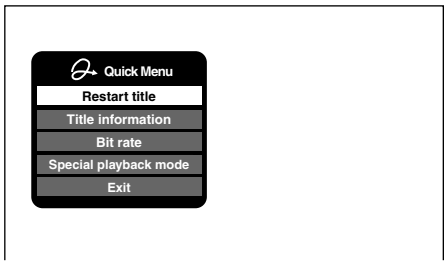
To access various optional functions of this recorder, open the Quick Menu. The Quick Menu displays a list of selections relevant to your current mode.

● Opening a Quick Menu

1) Press QUICK MENU.

The following menu ("Quick Menu") appears. (Actual selections vary depending on operational status.)

e.g.



2) Press ▲ / ▼ to select an item, then press ENTER.

● To exit the Quick Menu

Press QUICK MENU again.
Alternatively
Select "Exit" with ▲ / ▼, then press ENTER.

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Hint on reading this manual

The following icons show the playable discs for each function described on this instruction manual.

HDD : HDD

DVD-RAM : DVD-RAM disc

DVD-RW (VR) : DVD-RW disc (VR mode)

DVD-RW (Video) : DVD-RW disc (Video mode)

DVD-R (VR) : DVD-R disc (VR mode)

DVD-R (Video) : DVD-R disc (Video mode)

DVD-VIDEO : DVD video disc

VCD : VIDEO CD

CD : Audio CD

Most instructions are based on remote control operation, unless otherwise noted. You can use the buttons on the remote control and those on the main unit as well when they have the same function.

Notes

- Note that all recording content may be deleted if the unit is disconnected from a wall outlet, or a power failure occurs, during recording.
- If a power failure occurs within 5 minutes prior to the programmed recording start time, the programmed recording may not be executed.

If copy protection signal is detected during recording on this recorder, the recording automatically pauses and a message appears. In this case, the PAUSE button cannot release the recording. (It is possible to end the recording by pressing the STOP button.) If the copy protection signal continues, the recording will terminate.

Recording

Recording variations for many types of programmes or situations.

- **Before recording**
- **Programing a recording (REC MENU)**
- **Recording a TV programme**
- **Recording an external source**
- **Deleting recorded contents**
- **Others**

Before recording

Please be sure to read this section to get ready for your recording.

Initializing a disc

Initialize a new DVD disc before using on this recorder.
(Do not initialize a DVD-R if you use it in Video mode.)

■ Disc type and initialization

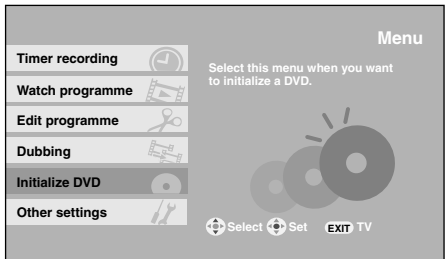
HDD		No need[*1]
DVD-RAM		Required[*2]
DVD-RW	VR mode	Required
	Video mode	Required
DVD-R	VR mode	Required[*3]
	Video mode	No need

[*1] The HDD which has become unoperatable because of its troubles may be recovered by initializing.
[*2] There are the following 2 ways in DVD-RAM initializing.
- Logical format: Normally use this method.
- Physical format: Use this method if a disc cannot be recovered by the logical format. (There is no guarantee that all such discs can be recovered.)

[*3] Re-initializing is not possible to DVD-R.

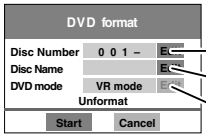
● Initializing a disc (Logical format)

1) Load a disc.
2) Press MENU.
3) Press ▲ / ▼ to select "Initialize DVD", then press ENTER.



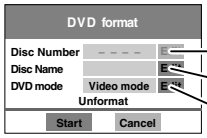
4) Select the recording mode and input the disc data if necessary.

DVD-RAM



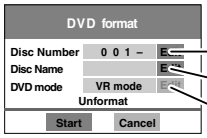
Can be changed.
Can be changed.
Fixed to "VR mode".

DVD-RW



Cannot be changed.
Can be changed.
Select "Video mode" or "VR mode".

DVD-R



Can be changed.
Can be changed.
Fixed to "VR mode".

Numbering a disc
The recorder automatically number discs when initializing. However, you can assign a desired number (using 3 digits) and designate sides A and B on a double-sided disc.

(1) Press the ▲ / ▼ buttons to select "Edit" of "Disc Number" then press the ENTER button.
(2) Press the ▲ / ▼ / ◄ / ► buttons to enter digits.
(3) Press the ENTER button.

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Naming a disc

(1) Press the ▲ / ▼ buttons to select “Edit” of “Disc Name” then press the ENTER button.

(2) Enter a disc name following the procedure of “Entering Characters” (page 128).

(3) Press the MODE button to save the name then exit.

Selecting the DVD mode

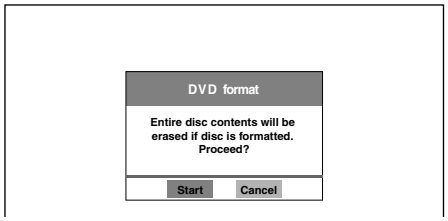
(1) Press the ▲ / ▼ buttons to select “Edit” of “DVD mode” then press the ENTER button.

(2) Press the ▲ / ▼ buttons to select the mode.

(3) Press the ENTER button.

5) Press ▲ / ▼ / ◄ / ► to select “Start”, then press ENTER.

6) Read the message, and press ◄ / ► to select “Start”, then press ENTER.



Initializing starts.

Notes

- Discs may be unusable if there are deterioration or defects in it.
- When a finalized DVD-RW is loaded, playback starts automatically. To initialize, stop the playback then follow the above procedure.

● Initializing a disc (Physical format)

Use this method when a DVD-RAM is not recovered by logical format method or when the recorder does not read a DVD-RAM which has been used. (There is no guarantee that all such discs will be recovered.)

1) Load a DVD-RAM.

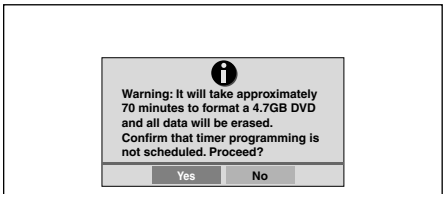
2) Open the lid of the remote control, and press SETUP.

(Alternatively, press MENU and select “Other settings” and press ENTER.)

3) Press RETURN then ◄ / ► to select “Management settings”, and press ENTER.

4) Press ▲ / ▼ to select “DVD-RAM physical format” then press ENTER.

5) Read the message, and press ◄ / ► to select “Yes”, then press ENTER.


Warning: It will take approximately 70 minutes to format a 4.7GB DVD and all data will be erased. Confirm that timer programming is not scheduled. Proceed?
Yes
No

6) Ask the question on shutting down using ◄ / ►, then press ENTER.

Notes

- The physical format process may fail if executed to a dirty DVD-RAM. Also the disc may be difficult to record even it is finished. Before executing DVD-RAM physical format process, be sure to confirm the disc is not dirty. Clean it if necessary. If the disc has scratches or dust beyond cleaner’s efficacy, do not execute DVD-RAM physical format process on the disc.
- The following DVD-RAM require physical formatting:
  – A disc which is not formatted correctly.
  – The disc which has some errors during writing because of dirt on the disc, and cannot be further recorded, or cannot initialize normally.
- Physical formatting does not work if the disc contains a lot of voids beyond the limitation of the recorder.
- If an error occurs in physical formatting, “ERR01” appears in the front panel display. To turn it off, press the DISPLAY button.

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Setting for recording on a DVD-R/RW disc in Video mode

Video mode recording enables playback of your favorite contents on other devices such as DVD players. Finish this setting beforehand if you make a Video mode recording, that is;
- when you record on a DVD-R/RW (Video mode).
- when you record contents which will be copied from the HDD to a DVD-R/RW (Video mode).

■ Items to set up

When recording in Video mode, there are some restrictions by DVD-Video standard.
Therefore, it is necessary to set up these items below.
Set up the items in advance before copying contents from the HDD to a DVD-R/RW (Video mode) disc.

● **DVD compatible mode**
Only the left channel sound and the right channel sound are available for recording in Video mode under DVD-R/RW standard.

Off: This is not for recording on a DVD-R/RW disc. Depending on Picture/Audio settings, making DVD Video may not be possible. (When recording directly on a DVD-R/RW disc of Video mode, the recording proceeds with "On (Mode I)" on even though "Off" is set.)

On (Mode I): In multichannel broadcasting, only the left channel sound is recorded.

On (Mode II): In multichannel broadcasting, only the right channel sound is recorded.

● **Aspect ratio (Video mode)**
"4:3" and "16:9" cannot be mixed in one title.
Therefore, set the aspect ratio before recording.
4:3: Set the aspect ratio to 4:3
16:9: Set the aspect ratio to 16:9

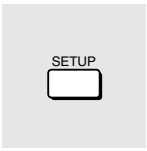
● **DVD-Video: CHP create**
This is the setting to divide a title into some chapters. It is convenient to skip scenes.
Off: Chapter dividing is not available.
5 min, 10 min, 15 min, 20 min:
Select an interval for chapter dividing.

Note
• When the number of chapters reaches a limit, chapters are not divided anymore. The limit number of chapters is dependent on conditions of a DVD-R/RW disc.

Note
• This setting is not effective in dubbing.

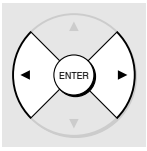
How to set up

1 Press SETUP during stop.

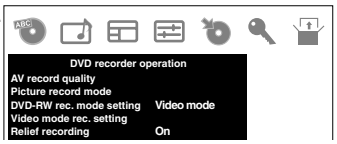


SETUP menu appears.

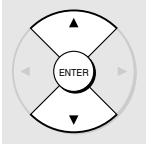
2 Select "DVD recorder operation" and press ENTER.



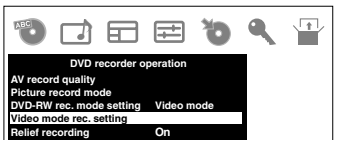
e.g.



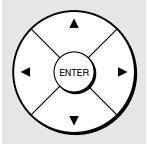
3 Select "Video mode rec. setting" and press ENTER.



e.g.



4 Press ▲/▼ to select an item then press ◄/► to change the setting, and finally press ENTER.



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Checking the disc space

1) Press REMAIN.
The current capacity per disc is displayed at the bottom of the screen. The current capacity of the selected drive is displayed on the front panel display.

2) After checking the capacity, press the button again to turn off the display.

Selecting the recording mode

1) Select the drive by pressing HDD or DVD.
CONTENT MENU appears.
Pressing the same button turns it off.

2) Press REC MODE repeatedly to select the recording mode.
Each time you press the button, the recording mode display on the front panel changes.

e.g. When a 4.7GB single sided DVD-RAM is used

	Recording time	Picture quality
XP	About 1 hour	Superior to “SP”.
SP	About 2 hour	Standard quality.
LP	About 4 hour	Inferior to “SP”.
MN	Adjustable. Make the settings of “Manual mode set” (page 122).	

Note
• You cannot change the recording mode while recording.

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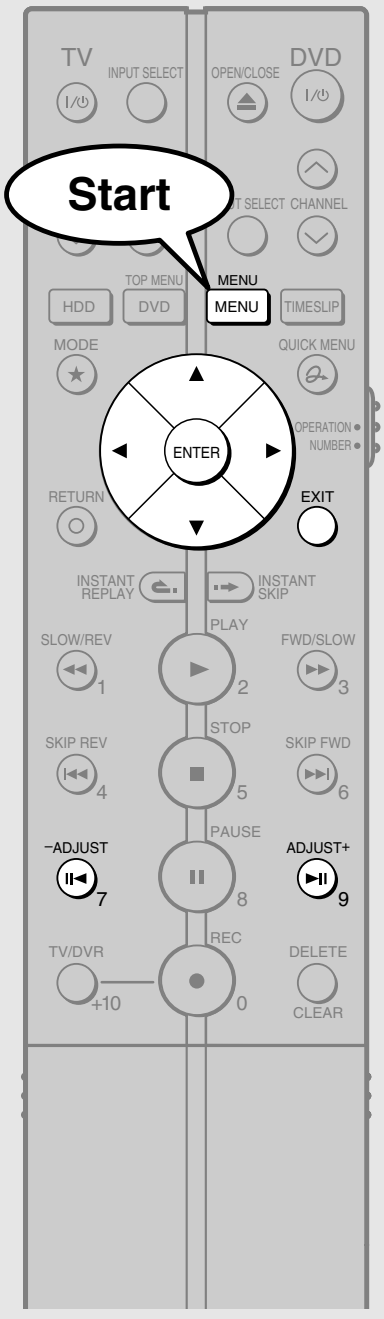
HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

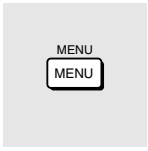
Programing a recording (REC MENU)

■ Preparation

- When you record on a DVD-RAM/R/RW, load it into the recorder.
- When you record on a DVD-R/RW (Video mode) or when you record contents which will be copied to a DVD-R/RW (Video mode), make the necessary settings (page 28).

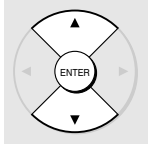


1 Press MENU.

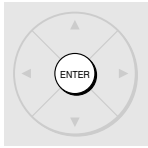


The menu appears.

2 Press ▲/▼ to select “Timer recording”, then press ENTER.

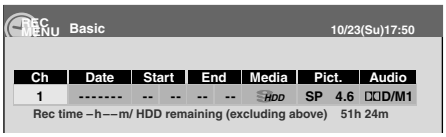


3 Press ENTER.

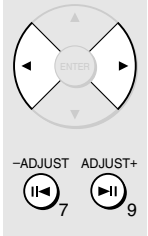


“Ch” is ready for setting.

e.g.

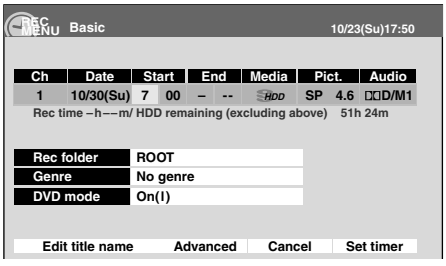


4 Select an item by pressing ◄/►, then press ADJUST (⏮/⏯) to set the item.



For details of the setting items, see page 33.

e.g.



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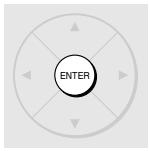
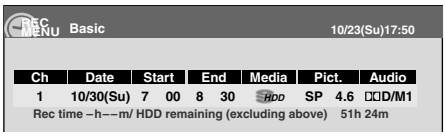
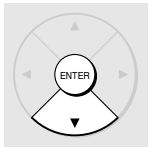
5 When complete, press ENTER.



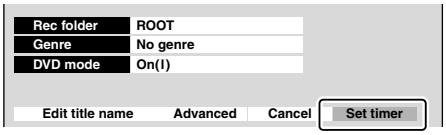
e.g.


Basic
10/23(Su)17:50
Ch Date Start End Media Pict. Audio
1 10/30(Su) 7 00 8 30 HDD SP 4.6 D/M1
Rec time –h––m/ HDD remaining (excluding above) 51h 24m

6 Press ▼ to select “Set timer” then press ENTER.



e.g.

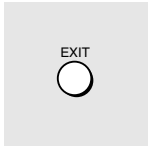


7 To programme another recording, press ▼ to move to the next line, then repeat steps 3 to 6.

8 Press EXIT to exit.

Your programme is entered.

- If you want to turn off the power, press the ON/STANDBY button.



Note

- The disc tray does not close automatically, even when the recording start time arrives. Set the recorder loaded an available DVD-RAM/R/RW disc beforehand.

■ Correcting a timer program

1) **Press MENU.**
2) **Press ▲ / ▼ to select “Timer recording”, then press ENTER.**
3) **Press ▲ / ▼ to select a timer program you want to change, then press ENTER.**
4) **Follow steps 4 to 6 to change the settings.**
5) **Press EXIT to exit.**

Important

- You cannot correct a timer program within 5 minutes before the recording start time. You can only delete the timer program.

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■ Deleting a timer program

The maximum timer program capacity is 32. Any new program will be rejected if the recorder is full. To enter a new program, you must cancel an existing one.

1) **Press MENU.**
2) **Press ▲ / ▼ to select "Timer recording", then press ENTER.**
3) **Press ▲ / ▼ to select a timer program you want to delete.**
4) **Press QUICK MENU.**
   The Quick Menu appears.
5) **Press ▲ / ▼ to select "Program cancel", then press ENTER.**
   Check the message, then delete the entry.

Note

- You cannot delete a timer program while another is executed.

■ To stop a programmed recording

1) **Select the recording drive by pressing HDD or DVD twice.**
2) **Press ■ on the front panel twice.**
   When you press the ■ button once, a message appears. While the message is displayed, press the ■ button once again.

Note

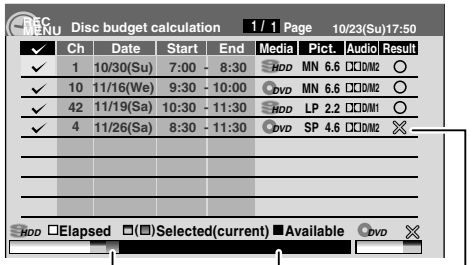
- If you press the STOP button on the remote control, a message appears. Select "Yes", then press the ENTER button.

■ Checking the remaining volume

1) **On REC MENU Timer Programming, press QUICK MENU.**
2) **Press ▲ / ▼ to select "Disc budget calculation" then press ENTER.**
   The Disc budget calculation menu appears.
3) **Press ▲ / ▼ to select a timer program, then press ENTER.**
   The recorder calculates on a bar graph how much a specific program (identified by a check mark) will occupy on the disc.

   Pressing the ADJUST button can display or remove the check mark.

e.g.


REC MENU
Disc budget calculation
1 / 1 Page
10/23(Su)17:50
Ch Date Start End Media Pict. Audio Result
1 10/30(Su) 7:00 - 8:30 HDD MN 6.6 D/M2
10 11/16(We) 9:30 - 10:00 DVD MN 6.6 D/M2
42 11/19(Sa) 10:30 - 11:30 HDD LP 2.2 D/M1
4 11/26(Sa) 8:30 - 11:30 DVD SP 4.6 D/M2
HDD Elapsed (Selected(current) Available DVD
Selected programme
Available disc space

When the entry item is marked X, the recording does not fit. Change the setting.
△ means this recording will not be executed due to limitation of recording time, if another is executed.

4) **Correct the parameters of the timer program if necessary.**

   (Skip to step 6 if you do not need this.)

   Select an item you want to modify and press the ENTER button. The item will be ready to be altered. (When "High rate save" is set to "On", "Pict." cannot be changed.)
   Press the ADJUST button to modify. When complete, press the ENTER button.
5) **Press MODE.**
   Program modification is registered.
6) **Press EXIT to exit the GUI.**

Notes

- The nearest 48 programs are calculated at a time.
- While the recorder is preparing for or executing a programmed recording, any program modification cannot be registered. Only programs which will start after 5 minutes or later can be modified.
- Available disc volume is not displayed for a DVD-R/RW disc on which DVD-Video finalize process was executed.

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■ Setting items at step 4, 7 (page 30)

Exec	√	A timer program with this mark will be executed, To disengage, remove this indicator.
Ch	1-99, L, AV1, AV2	Select a channel you want to record.
Date	Specified date (from today to 2 month later) Every Sunday to Saturday, Monday to Thursday, Monday to Friday, Monday to Saturday, everyday.	Select a date of a TV programme you want to record.
Start*	0:00 - 23:59	Enter a starting time of recording. (An initial setting is 10 minutes later.) You can also use the number buttons.
End*	0:00 - 23:59	Enter an end time. (Set the timer to begin recording no sooner than 2 minutes past the current time. Recording must not exceed 8 hours.) You can also use the number buttons.
Media	DVD	When you record on a DVD-RAM/RW/R disc.
	HDD	When you record on the HDD.
Pict.	XP	For recording in the best picture quality, but shorter than “SP” in recording time. (More disc capacity is required.)
	SP	Standard setting of recording time and picture quality.
	LP	For longer recording, but inferior to “SP” in picture quality.
	MN(Manual)	Customized setting of rate (bit rate).
	AT(Auto)	To set a rate automatically according to the remaining volume of the disc. (If the disc does not have room for the TV programme, the programme cannot be recorded to the end.) When you select the HDD, the recorder records for a length of time corresponding to that of a blank DVD-RAM disc (4.7GB). Not applicable to a recording for 2.5 hours or longer.
Pict.	1.0, 1.4, 2.0-9.2	Not applicable when “XP”, “SP”, “LP” or “AT” is selected. You can set a rate from 1.0, 1.4 and at intervals of 0.2Mbps from 2.0 to 9.2. (The upper limit of the value depends on the “Audio” setting.)
Audio	DD D /M1	Standard setting.
	DD D /M2	Superior to DD D/M1.Recommended for recording music programmes.
	L-PCM	Uncompressed original digital audio. Equal quality to audio CD, but recordable time will be shorter.

The digital recording technology for consumer products of Dolby Laboratories is used for DD D/M1 and DD D/M2. Dolby Digital 192 kbps is set for DD D/M1 and Dolby Digital 384 kbps for DD D/M2.

Notes

- “Start” and “End” accept time up to 30:59 if you use the number buttons. When you enter a time over 24:00 and press the ENTER button, “Date” will gain one day, and the time will be corrected to 0:00-6:59.
- If you record with setting the bit rate to about 4.0 Mbps or below, the recorded pictures may not be played properly if change the playback speed. There will be noise, and the picture quality is lower than other rate settings.

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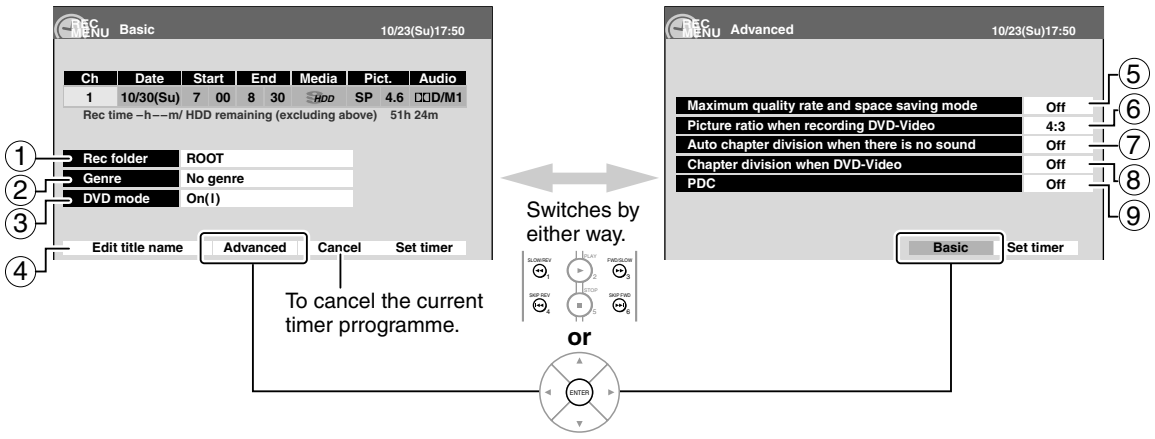
Optional settings on REC MENU

The following setting options are available for each timer programme. Follow steps 1) to 3).

1) Select a desired one (① - ⑨) using ▲/▼/◄/►, then press ENTER.
A sub menu (or keyboard) appears.

2) Make the setting.
Refer to the descriptions below.

3) Finally select "Set timer" using ▲/▼/◄/►, then press ENTER.
The settings are saved.


REC MENU Basic
10/23(Su)17:50
Ch Date Start End Media Pict. Audio
1 10/30(Su) 7 00 8 30 HDD SP 4.6 DD/M1
Rec time –h––m/ HDD remaining (excluding above) 51h 24m
1 Rec folder ROOT
2 Genre No genre
3 DVD mode On(I)
4 Edit title name
Advanced
Cancel
Set timer
To cancel the current timer prrogramme.
Switches by either way.
or
REC MENU Advanced
10/23(Su)17:50
5 Maximum quality rate and space saving mode Off
6 Picture ratio when recording DVD-Video 4:3
7 Auto chapter division when there is no sound Off
8 Chapter division when DVD-Video Off
9 PDC Off
Basic
Set timer

① Rec folder

To select a folder into which the programme is saved.

Available folders appear. Select one from them.

- For the folder function, see ⇨ page 50.

② Genre

To select a genre of the programme.

Available genres appear. Select one from them.

- For genres, see ⇨ page 124.

③ DVD mode

Make this setting when this timer programme is (or will be) onto DVD-R/RW (Video mode).

Off / On(I) / On(II)

See ⇨ page 28.

④ Edit title name

To enter a name of the timer programme.

A keyboard appears.

- For keyboard operation, see ⇨ page 128.

⑤ Maximum quality rate and space saving mode

Use this feature when you want to save space while using the best picture quality rate for recording. This will use 9.2 Mbps for recording and reduce the rate temporarily for the portion where the high rate is not required where picture is fairly constant.

Off: This feature is disabled and the normal recording is performed.

On: This feature is enabled.

Notes

- When the audio quality is set to "L-PCM", the picture quality is set to "MN 8.0 (Mbps)". When the audio quality is set to any other selection, the picture quality is set to "MN 9.2 (Mbps)".
- "On" returns to "Off" if you change "Pict." setting.
- The space used may not change, depending on the picture contents.

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⑥ Picture ratio when recording DVD-Video

Make this setting when this timer programme is (or will be) onto DVD-R/RW (Video mode).

Video mode cannot record a title which contains both 4:3 pictures and 16:9 pictures.

4:3: Aspect ratio is fixed to 4:3 to record.

16:9: Aspect ratio is fixed to 16:9 to record.

⑦ Auto chapter division when there is no sound

This feature automatically creates divisions for chapters when no audio (no audible sound) portion is found.
For example, when you have recorded a programme of music clips, you can use this feature to jump to the beginning of a clip during playback.

Off: This feature is disabled.

On: Division for chapters are created when no audio portion is found.

Notes

- Division for chapters may not be created, depending on the contents of the programme or the condition of no audio portion, or it may be created at different positions. A division for a chapter may be created within a music clip.
- Depending on the specification made for the recording sound level, a division for a chapter may not be created or it may be created at different positions.
- Setting “On” may create chapters, and their number may reach the maximum allowed. At that point, no more chapters can be created. In this case, decrease the chapters, for example, combining chapters.
- This feature is not available on DVD-R/RW discs (Video mode). To create chapters automatically during recording on DVD-R/RW disc (Video mode), set “DVD-Video chp div”.

⑧ Chapter division when DVD-Video

Make this setting when this timer programme is (or will be) onto DVD-R/RW (Video mode).

This feature creates chapters automatically while recording. Chapters enables skipping play of the recorded disc.

Off: This feature is disabled.

5 min / 10 min / 15 min / 20 min:
Select the interval of chapters.

Notes

- If a number of chapters reaches the maximum, which may vary depending on the disc condition, no more chapters are created.

⑨ PDC

To activate the PDC recording feature to record the programme or not.

PDC (Programme Delivery Control System)
Programme PDC is a system of telling the recorder when a programme actually starts. Typically, when you want to record programme you will tell the recorder to start recording, probably, five minutes before the advertized starting time of the programme and to finish ten minutes or so after the programme is due to finish. So even if the programme starts early or finishes late you will normally still get to see what you wanted to record. However when live programme over-run or the day’s television schedule is changed from that advertized, you may miss the desired programme which may have been delayed or even cancelled and the recorder will record the programme even if it is two or more hours late. With PDC, you enter the exact start time and the recorder will wait until the signal is sent to confirm the programme is starting and the recorder will record the programme even if it is two or more hours late.

Off: This feature is disabled.

On: This feature is enabled.

Note

- When setting “Ch” to “L”, “AV1” or “AV2”, this function is not available.

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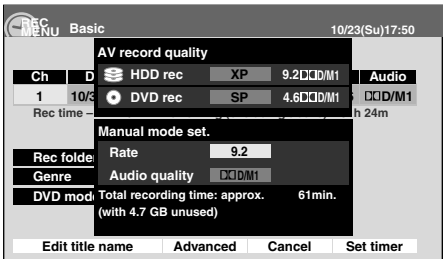
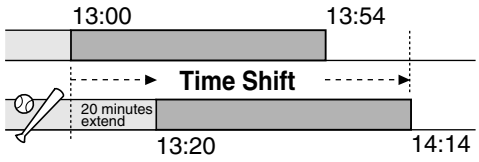
■ Changing the default settings of recording quality

1) **While REC MENU Basic (e.g. step 4) is displayed, press QUICK MENU.**
2) **Press ▲/▼ to select "AV record quality", then press ENTER.**
3) **Follow steps 1 to 3 (page 122).**



■ Shifting a time period of a recording (Time Shift)

If a prior TV programme extends beyond its scheduled time and into one that you programmed, you can shift the programmed start and end time of the recording.



1) **Press MENU.**
2) **Press ▲/▼ to select "Timer recording", then press ENTER.**
3) **Press ▲/▼ to select a timer programme you want to shift the time period.**
4) **Press EXTEND.**
   "Start" and "End" are ready to be input.
5) **Press EXTEND repeatedly.**
   Each time you press the button, "Start" and "End" are shifted in 10 minutes intervals up to 60 minutes later.
6) **Press ENTER.**
7) **Press ▼ to select, "Set timer", then press ENTER.**
8) **Press EXIT to exit.**

Note

- After you shifted the time of a timer programme which will be repeatedly daily or weekly, you should restore the original start/end time for future recordings.

■ Turning the power off automatically after completing a programmed recording

1) **While executing a programmed recording, press QUICK MENU.**
2) **Press ▲/▼ to select "End time", then press ENTER.**
3) **Press ▲/▼ to select the recording end time and power condition after the recording finishes. (◄/► to shift the cursor.)**
   End time:
   Set the hour and minute.
   Pwr Off:
   On: Power will be on also after the recording.
   Off: Power will turn off after the recording.
4) **Press ENTER.**

Notes

- The recording end time cannot be changed in the following cases;
  – within 1 minute before the recording end time.
  – advancing the recording end time.
  – during recording in AT mode.
- Even if you extend the recording end time, the recording will stop when the HDD is filled up. Also at 8 hours from the start time the recording will stop.

■ Relief recording

If you set a timer programme to a loaded DVD disc but the disc does not have remaining space to record the programme, the recorder records the whole programme to the HDD instead of the loaded disc.

To use this function, set "Relief recording" (page 123) to "On".

Notes

- This function works also when you start a recording on a loaded DVD disc by pressing the REC button and the remaining space of the disc is under 10 minutes. (The programme is not recorded on the disc.)
- This feature does not work when the HDD does not have remaining space to record the programme.
- If the recording end time is extended after starting a timer programmed recording, the programme is not recorded onto the HDD. The loaded disc records the programme until it is filled up then stops recording.

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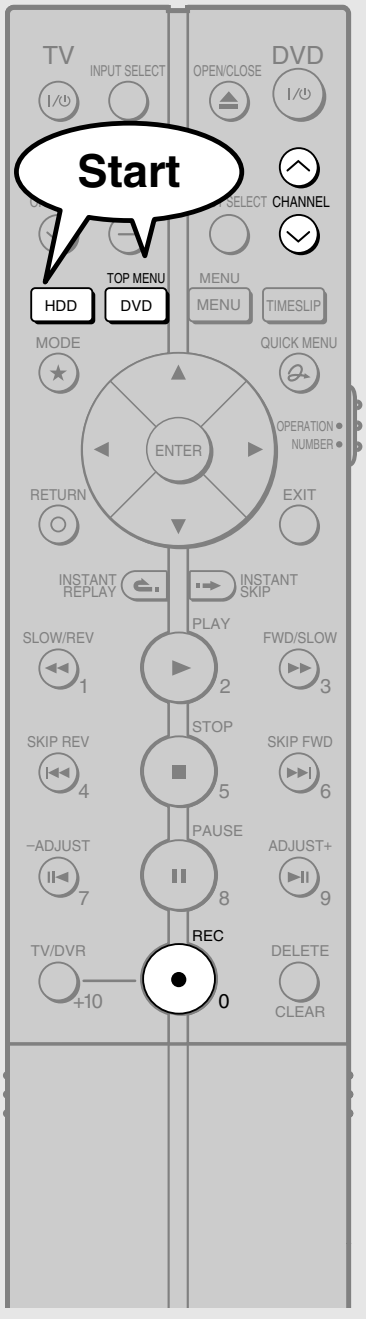
HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Recording a TV programme

To record a TV programme currently being broadcast, follow the procedures of this chapter.

■ Preparation

- When you record on a DVD-RAM/R/RW disc, load it into the recorder.
  - Load a disc which has sufficient space available to record the programme.
  - Make sure the loaded disc is not write-protected.
- If you record on a DVD-R or a DVD-RW disc, set “DVD compatible mode” (page 28) to “On (Mode I)” or “On (Mode II)”. In DVD-R/RW recording, “Off” setting is regarded as “On (Mode I)”.
- If you record on a DVD-R or DVD-RW disc, set “Aspect ratio (video mode)” (page 28) according to recording sources.



1 Press HDD or DVD to select a media to record on.

HDD / TOP MENU DVD

HDD : To record on the HDD.
DVD : To record on a DVD-RAM/R/RW disc.

CONTENT MENU appears.
Pressing the same button turns it off.

2 Press CHANNEL to select a channel to record.

CHANNEL

The number buttons are also available.
Be sure to set the OPERATION/NUMBER switch to “NUMBER” before using the number buttons.

3 Press REC.

REC 0

Recording starts.

Recording a TV programme (Continued)

Notes
- The number of titles cannot exceed 99 for a DVD-RAM/RW/R disc or 396 for the HDD.
- One continuous recording cannot exceed in any case 8 hours. Recording automatically stops at 8 hours.
- You cannot start recording immediately before a programmed recording starts.
- During monaural sound recording, the same sound is recorded on both the left and right channels.
- When "Audio" is set to "L-PCM", multi-channel sound is recorded as stereo sound. When playing this recorded sound, you will hear NICAM Mode I and NICAM Mode II sounds simultaneously. Press the AUDIO button to select a desired sound.
- When "DVD compatible mode" is set to "On (Mode I)" or "On (Mode II)", the unit records the same sounds on both the left and right channels when receiving monaural sound. When receiving the NICAM Mode I/Mode II sound, the selected sound, Mode I or Mode II, is recorded on both the left and right channels.
- Depending on the disc condition, pressing the REC button may take a longer time to start recording.
- When a starting time of a programmed recording comes, a recording in execution is stopped and the programmed recording starts. If you do not want to stop the recording, cancel the timer program before it starts.
- Even if you set "Aspect ratio(video mode)" (page 28) to "16:9", images are recorded in 4:3 aspect ratio when using a DVD-R or DVD-RW disc with "Pict." set to "1.0" (Mbps) or "1.4" (Mbps).

■ To stop recording

Press STOP.

■ To pause recording (to omit an unnecessary portion)

During recording, press PAUSE.
To resume recording, press it again.

Note
- While recording onto a DVD disc, pressing PAUSE on the recorder automatically creates a new chapter division at that point.

■ To change a TV channel to be recorded

1) **During recording, press PAUSE.**
   Recording pauses.
2) **Press CHANNEL to change the channel.**
3) **Press PAUSE to resume recording.**

■ To view a TV programme while recording another

1) **Start recording on this recorder.**
2) **Press TV/DVR.**
3) **Using the channel selector of the TV, select a desired channel on the TV.**
   If you press the TV/DVR button again, you will go back to the display that you are recording.

Note
- This function is available only when the TV is connected to the AV1 (TV) socket.

■ To set an end time of a recording which is in progress

1) **During recording, press QUICK MENU.**
   The Quick Menu appears.
2) **Press ▲ / ▼ to select "End time" then press ENTER .**
3) **Press ▲ / ▼ to select the recording end time and power condition after the recording finishes. (◄ / ► to shift the cursor.)**
   End time:
   Set the hour and minute.
   Pwr Off:
   On: Power will be on also after the recording.
   Off: Power will turn off after the recording.
4) **Press ENTER.**

Notes
- By setting an end time, it is memorized as a programmed one, and the ⏲ indicator in the front panel display illuminates to indicate that the recorder holds a timer program of recording.
- The programmed end time must be set for 5 minutes later than the current time.

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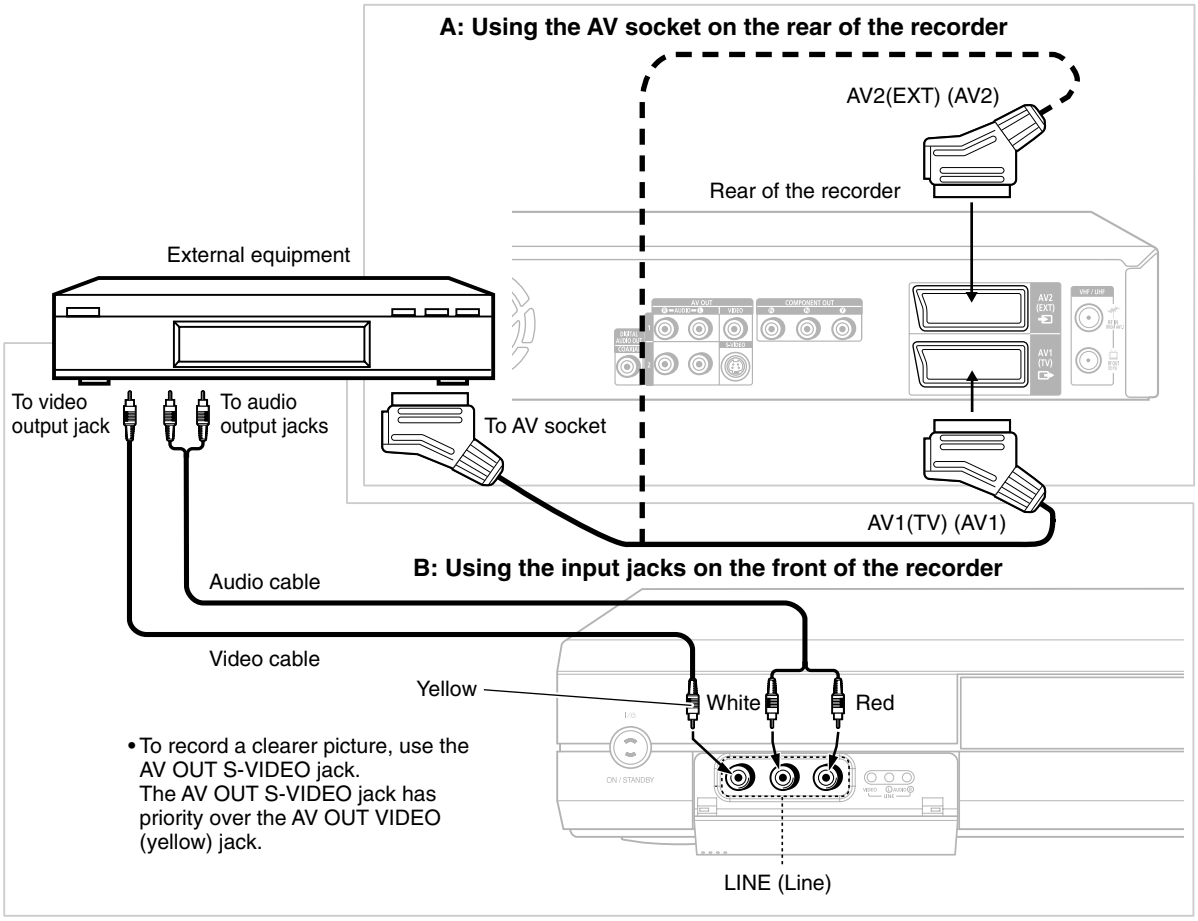
HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Recording an external source

You can record programmes from connected equipment on the HDD or a DVD-RAM/R/RW disc.

Connect according to A or B.


A: Using the AV socket on the rear of the recorder
AV2(EXT) (AV2)
Rear of the recorder
External equipment
To video output jack
To audio output jacks
To AV socket
AV1(TV) (AV1)
B: Using the input jacks on the front of the recorder
Audio cable
Video cable
Yellow
White
Red
• To record a clearer picture, use the AV OUT S-VIDEO jack. The AV OUT S-VIDEO jack has priority over the AV OUT VIDEO (yellow) jack.
LINE (Line)

■ Preparation

- When you record on a DVD-RAM/R/RW disc, load it into the recorder.
  – Load a disc which has sufficient remaining space to record the programme.
  – Make sure the loaded disc is not write-protected.

Notes

- If a source of high quality sound track such as DVD audio is recorded with this recorder, the sound quality becomes regular audio CD quality. Refer to the instructions of the connected equipment.
- When you record an external source onto a DVD-R/RW disc (Video mode) or the contents which will be copied to a DVD-R/RW disc (Video mode) later on, set the connected equipment to output sound you want to record (if selectable such as multiplex broadcasting), as the recorder records sounds of external source in stereo onto a DVD-R/RW disc, ignoring the setting of “DVD compatible mode” (page 28).
- DVD-R/RW discs (Video mode) cannot record contents with copy restriction signal embedded (copy-protected or copy once contents), the HDD, DVD-RAM disc, CPRM compatible DVD-R/RW (VR mode) can record copy once contents.
- Some satellite programmes via a connected tuner may contain both 4:3 pictures and 16:9 pictures. DVD-R/RW discs (Video mode) cannot record such contents, under restriction of the DVD-Video standard. To record these programmes, use the HDD or DVD-RAM discs.

(Continued)

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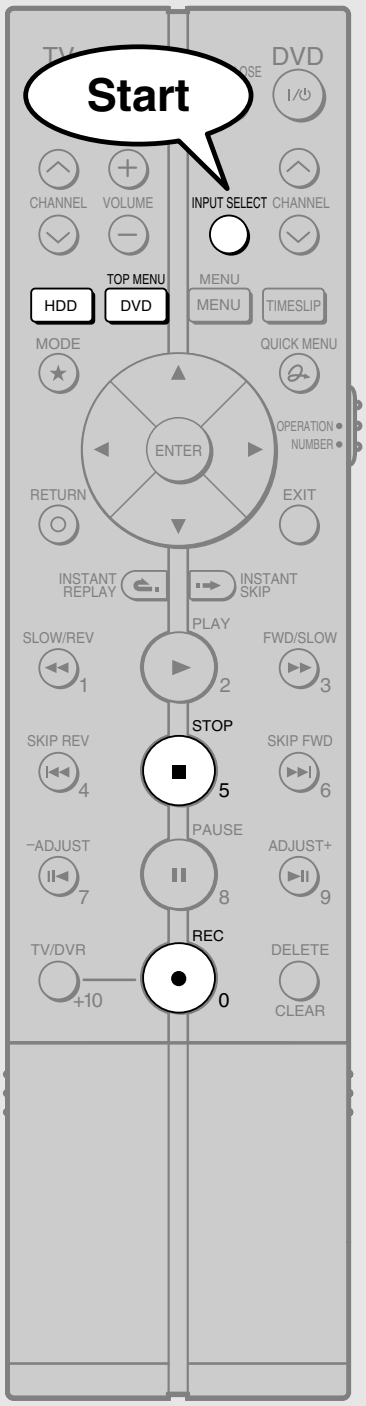
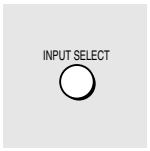
Recording an external source (Continued)



1 Press INPUT SELECT repeatedly so that "LINE", "AV1" or "AV2" appears on the front panel display, corresponding to the input in which the device is connected.



Each time you press the button, the indicator changes.

LINE: To record pictures from equipment connected to the LINE jacks on the front panel.

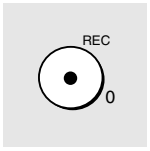
AV1: To record pictures from equipment connected to the AV1(TV) socket on the rear panel.

AV2: To record pictures from equipment connected to the AV2(EXT) socket on the rear panel.

2 Press HDD or DVD to select a recording media.

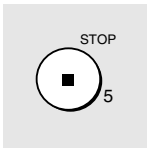
HDD : To record on the HDD.
DVD : To record on a DVD-RAM/R/RW disc.

3 Press REC of this recorder to start recording.



4 Start playback of the source content on the connected equipment.

5 When recording is completed, press STOP.



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■ Notes on recording from a connected VTR or camcorder

● **Check the condition of the source equipment before playing.**
Set the equipment in good condition, e.g. clean the head or adjust the tracking, etc. to obtain optimum playback. Bad conditions may produce noises in playback. These noises may be detected as copy protection signals, resulting in stop of recording on this recorder.
Play a source in an usual mode. Avoid using any correcting or enhancing features, as they may add signals which can be detected as copy protection signals.
Source quality or tape condition beyond adjustments on the source equipment may stop a recording on this recorder.

● **Do not operate the source equipment during recording on this recorder.**
Operations such as pausing, resuming, fast-forwarding (CUE) and fast-reversing (REVIEW), etc. may produce noises, which may be detected as copy protection signals. Therefore, first start playback on the source equipment to confirm that the desired source can be played properly, and then start recording on this recorder. Do not operate the source equipment during recording. After completing the desired scene, stop the recording on the recorder, and then stop the playback on the source equipment. Delete unnecessary scenes using editing functions (⇨ page 74). If you want to operate the source equipment during recording, pause or stop the recording. After operating the source equipment, resume the recording as above.

● **When recording from a camcorder**
Follow the above notes. Be sure to power the camcorder by its AC adapter, not batteries. If batteries are used, the recording may be finished on the way.

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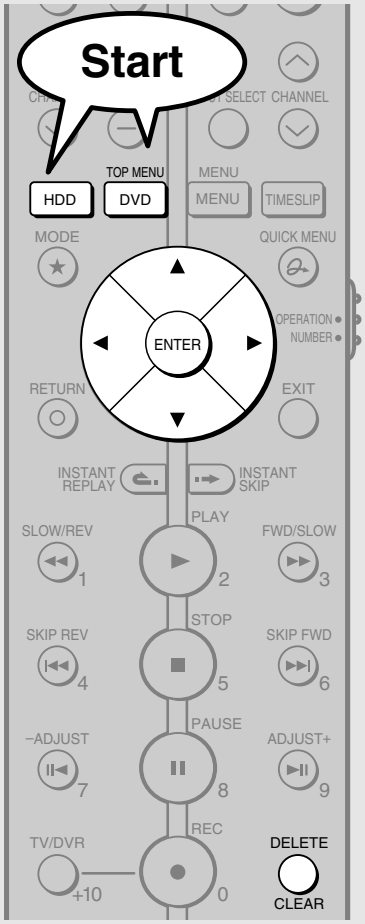
HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Deleting recorded contents

Important note
Any deleted title/chapter (original) cannot be restored. Before deleting, be sure to check contents on the disc.

On a finalized DVD-R/RW disc, this feature is not possible.

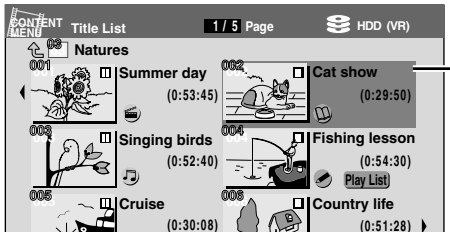
To delete a title (chapter)



1 **Press HDD or DVD, then press ▲/▼/◄/► to select a title to delete.**

To display chapters, press the MODE button.

e.g.



Select a title to delete pressing ▲/▼.

2 **Press DELETE.**

DELETE / CLEAR

Alternate method:
Press the QUICK MENU button, then press the ▲/▼ buttons to select “Title delete” (“Chapter delete”) and press the ENTER button.

3 **Read the message and press ◄/► to select “Yes,” then press ENTER.**

Deleting multiple specified parts

1) **During play or stop, press MENU.**
2) **Press ▲/▼ to select “Edit programme”, then press ENTER.**
3) **Press HDD or DVD to select a disc that contains titles or chapters you want to delete.**
4) **Press ▲/▼ to select “Del rec. programme”, then press ENTER.**
   “EDIT MENU Del Selected items” appears.
5) **Select a part (a title or chapter) to delete.**
   (To select a part, see ⇨ page 83 – 84)
6) **Press ▼ repeatedly to select “Start”, then press ENTER.**
7) **Read the message and press ◄/► to select “Yes”, then press ENTER.**
   The recorder begins the deletion process.
   To cancel deleting, press the ◄/► buttons to select “No”, then press the ENTER button.

Notes
- On a DVD-RW disc, only the last title recorded can restore the disc capacity by being deleted.
- On a DVD-R disc, deleting cannot restore the disc capacity.

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Others

To protect recorded content

You can protect recorded content from unexpected deletion.
Protection is provided for each title (original).

1) **Perform steps 1 and 2 in "Playing recorded contents (CONTENT MENU)" (page 46) to select a title.**
2) **Press the QUICK MENU button, and press the ▲/▼ buttons to select "Title information". Then press the ENTER button.**
3) **Press the QUICK MENU button, and press the ▲/▼ buttons to select "Lock" and then press the ENTER button.**
   The mark 🔒 appears.

Notes
- To cancel protection, repeat this procedure. At step 3), select "Unlock".
- Disc initialization erases all titles on a disc even if they are protected.
- Executing "All HDD titles delete" (page 124) erases all titles on the HDD even if they are protected.

Technical information

● About recording time

The recording time of a typical VCR (Video Cassette Recorder) is determined by the length of a video tape and recording speed (SP, LP, etc.). Video tapes with various recording times are available in the market. On the other hand, the recording time of a DVD-RAM/R/RW depends on the bit rate (Mbps: amount of data transmitted per second), which can be varied in MPEG2 (Moving Picture Experts Group2) compression technology.
As an example, when you pour water into a bucket from a faucet, the faster the water flows, the sooner the bucket is filled with water. On the other hand, the slower the water flows, the more slowly the bucket is filled. The DVD-RAM/R/RW is, so to speak, such a bucket, and the degree you turn the faucet is bit rate, the time required to fill the bucket with water is the recording time available for a disc. The higher you set the bit rate (making much more water flow), the sooner a disc is filled. Consequently, the recording time becomes shorter. The lower you set the bit rate, the longer time it takes to fill a disc.

● About picture quality (XP, SP, LP, AT (Auto), MN (Manual) mode)

The higher you set the bit rate, the more the volume of information for the picture. The lower the bit rate, the less the volume of picture information.

However a high bit rate does not always mean that the picture quality is high. The difference between the 1.4 Mbps and 9.2 Mbps is obvious, but when comparing similar bit rates, the difference may be insignificant. Generally when you set the bit rate low for longer recording time, the data volume shortage will result in a lack of detail information. As a result, the picture quality is decreased (more noticeable with dynamically moving images). For example, square noises (block noise) may occur in a scene with fast action or a scene with light and shadows, such as a water surface.
This recorder has several settings, for example 2 hour recording at "SP" mode or 4 hour recording at "LP" mode (both assume a blank 4.7 GB DVD-RAM). It is recommended to consider the "SP" mode as a standard mode and use the "LP" mode when you want to record for long time regardless of the picture quality. If you want to record for about 2 hours or are uncertain which one to select, select the "AT" mode.
On a blank 4.7 GB DVD-RAM disc, the "AT" mode automatically sets the appropriate bit rate corresponded to the recording time from about 1 hour to up to 2 and a half hours so that you can achieve the best picture quality. If a part of a DVD-RAM disc has already been recorded, the "AT" mode sets the bit rate suitable for the remaining space on the disc. (The picture quality is determined referring the remaining space just before recording. When the remaining space is scarce in the disc, the picture quality may decrease from what you set beforehand or the recording may stop halfway.) "AT" mode is available also on DVD-R/RW recordings.
When you want to record a music program or animation with high picture quality, it is recommended that you select the "MN" mode. If you select more than 6 Mbps, you can usually record with considerably higher picture quality. However the higher you set the bit rate, the shorter the recording time.

● D /M1, D /M2

Sound recording format onto DVD-RAM discs. When recording, sounds are converted into digital signals and compressed. In playback, they are extracted to the original sound. The standard differenciates D / M1 and D /M2 in data volume to use. D /M1 and D /M2 are applied the digital recording technology for consumer products of Dolby Laboratories. Dolby Digital 192 kbps is set for D / M1 and Dolby Digital 384 kbps for D /M2.

● L-PCM (Linear PCM)

Sound recording format, like Dolby Digital. However, sounds are converted into digital signals and recorded as they are without compression. This process requires more data than Dolby Digital.

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Playback

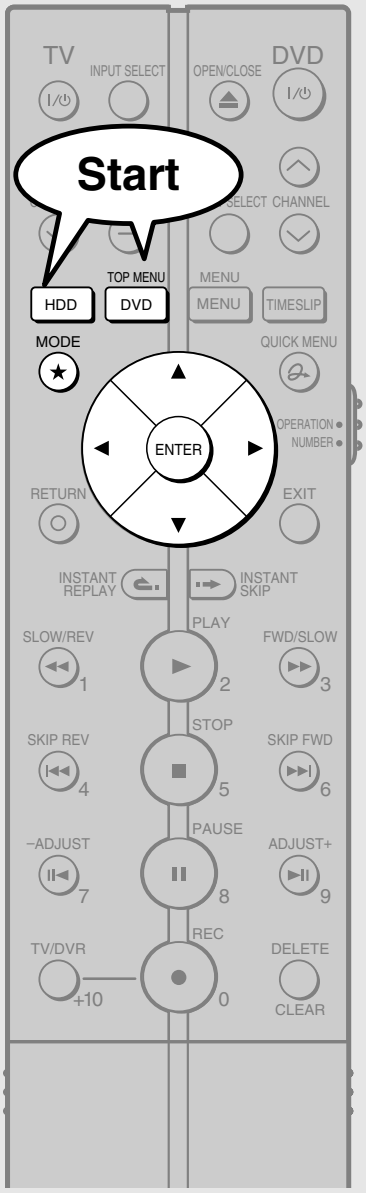
Play your favorite contents.

- **Playing recorded contents (CONTENT MENU)**
- **Folder function**
- **Playing a DVD video disc**
- **Other playback functions**

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Playing recorded contents (CONTENT MENU)

Titles and chapters recorded on the HDD or a DVD-RAM/R/RW disc are displayed in thumbnail view, so that you can easily locate a desired one.



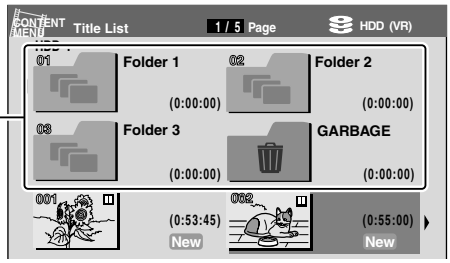
1 Press HDD or DVD to select the drive.

HDD: Contents in the HDD
DVD: Contents in a loaded disc

(Contents recorded on other devices or those in a finalized DVD-R/RW are not displayed.)

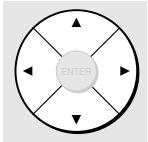
The “CONTENT MENU Title List” appears.

e.g.



See “Folder function” (page 50)

2 Press ▲ / ▼ / ◄ / ► to select a title (chapter).



You can view succeeding or prior pages by pressing the SKIP REV (I◄◄) or SKIP FWD (►►I) button.
To select a chapter, select a title and press the MODE button.
The Chapter List appears.
By pressing the MODE button again, you can return to the Title List.

3 Press ENTER.

Playback starts from a selected title (chapter).

Notes

- In a CONTENT MENU, titles (Original) precede titles (Playlist), in order from the oldest one respectively.
- To turn off the CONTENT MENU, press the EXIT button. Absence of operations for longer than about 15 minutes also turns off the CONTENT MENU.
- The mark ❚❚ is displayed in every thumbnail when “HDD/RAM title play” (page 121) is set to “Title resume”. When set to “Serial playback”, it is displayed in a thumbnail last operated.
- You can change a thumbnail picture. See page 106.
- You cannot display the CONTENT MENU for DVD-R/RW discs recorded on other devices.
- For playing a recorded title while recording another, see page 49.
- A black thumbnail with “Recording” means that the title is being recorded or its recording will start within 15 seconds. This thumbnail cannot start playback.

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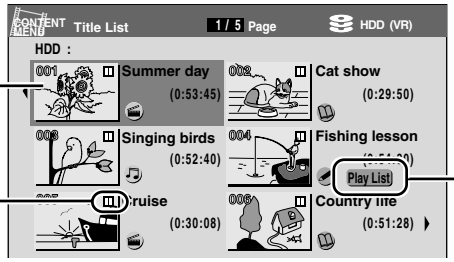
■ Reading CONTENT MENU

Each recorded content is displayed as its thumbnail. Each time you press the ZOOM button in the lid, you can switch displays between title thumbnail and title list.



A fictitious title created by editing is marked with “Playlist”.

This shows that the recorder memorizes the location you last stopped playback in each title.
To use this function, set “HDD/RAM title play” to “Title resume”. (⇨ page 121)
You can make the recorder memorize only the very last point, regardless of the number of titles.
Set “HDD/RAM title play” to “Serial playback”. (⇨ page 121)

Titles (Original) precede titles (Playlist) in order from the oldest one.

■ To stop playback

Press STOP.

■ To pause playback (still playback)

Press PAUSE.

To resume normal playback, press the PLAY button or the PAUSE button.

Note
- Sound is muted in still mode.

■ To skip by 1/20 of whole

During playback, press ◄/►.
Each time you press the button, you can skip by 1/20 of the current title or track if it is longer than 1 minute.

■ To skip the contents in pre-determined increments

During playback, press INSTANT SKIP.
Each time you press the button, you can skip by a specified time.
You can select the interval per press of the button.
See “Instant skip interval” (⇨ page 121).

■ To skip back in pre-determined increments

During playback, press INSTANT REPLAY.
Each time you press the button, you can go back by the specified time to resume playback.
You can select the interval per press of the button.
See “Instant replay interval” (⇨ page 121).

Notes
- This operation may not work for some discs.
- Depending on the structure of a disc, some operations may be limited.
- Depending on playback conditions, some operations may not work.

■ Erasing content

1) **At step 2 on ⇨ page 46, select an unnecessary title (chapter).**

2) **Press DELETE.**
   - A message appears. Select “Yes”, then press ENTER. The content will be deleted.

Note
- While selecting an unnecessary title (chapter), you can delete by selecting “Title delete” or “Chapter delete” from the “Quick Menu”.

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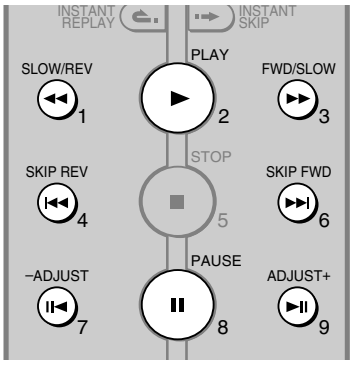
Playing at various speeds

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD



● Playing in fast reverse or fast forward

During normal playback, press SLOW/REV or FWD/SLOW.

►► : Fast forward playback
◄◄ : Fast reverse playback

Each time you press the button, the playback speed changes. During fast forward playback at "►►" speed, sound is reproduced. (Not available on VIDEO CD.)

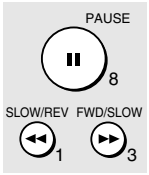
- This function is not available when you play a title recorded on a DVD-RAM disc while recording another.

Notes

- The playback speed may vary depending on the disc.
- Depending on the disc or data condition, picture and sound in fast forward playback at "►►" speed may be disturbed.

● Playing in slow-motion (Not available in CD playback)

Press PAUSE, then press SLOW/REV or FWD/SLOW during playback.



►► : Forward slow-motion
◄◄ : Reverse slow-motion

Each time you press the button, the slow-motion speed changes.

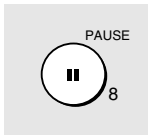
- **To resume normal playback**
  Press PLAY.

Notes

- Slow-motion does not provide smooth playback.
- When playing a VIDEO CD, reverse slow-motion playback is not available.
- The speed level displayed is approximate.

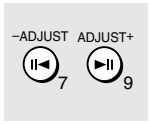
● Playing frame by frame

1) During playback, press PAUSE.



A still picture is displayed.

2) Press ADJUST.



►II : Playback direction
II◄ : Opposite direction

- **To resume normal playback**
  Press PLAY or PAUSE.

Notes

- Sound is muted during frame by frame playback.
- Frame by frame playback cannot provide smooth playback.
- Picture may advance more than 1 frame at a time.
- Depending on scenes, some frames may not be played.
- When playing a VIDEO CD, reverse frame by frame playback is not available.

● Skipping to the next/previous chapter or track

Press SKIP REV or SKIP FWD repeatedly until the chapter or track number you want appears.

Playback starts from the selected chapter or track.

►►I : Playback starts from the beginning of the next chapter or track.
I◄◄ : Playback starts from the beginning of the current chapter or track. When you press twice, playback starts from the beginning of the previous chapter or track.

Notes

- Some titles may not display chapter numbers.
- When playing the HDD or a DVD-RAM disc, you can access chapters only in the current title if "HDD/RAM title play" (page 121) is set to "Title resume". To access chapters in other titles, set to "Serial playback".
- When playing a DVD video disc or a DVD-R/RW disc (Video mode), you can locate chapters only in the current title if "DVD title stop" (page 117) is set to "On". To access chapters in other titles, set to "Off". However, in this instance even though you press SKIP REV button (I◄◄) to go back to the previous title, playback will not start from the last chapter of the title but from the first chapter.

● Viewing still pictures DVD-RAM DVD-VIDEO

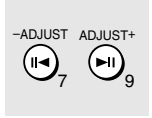
(Playing a disc that contains still pictures)

1) Press PLAY.

The first still picture on a disc is displayed.

Some DVD video discs may allow you to change the pictures using the PLAY, ENTER or SKIP REV or SKIP FWD button.

2) Press ADJUST.



►II : Displays the next still picture.
II◄ : Displays the previous still picture.

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■ Resuming playback from the location last stopped (Title resume)

The recorder memorizes the location you last stopped playback to resume from there.

To use this function, set "HDD/RAM title play" (page 121) to "**Title resume.**" The recorder will memorize the location you last stopped at in each title, so you can resume playback from there. For example, if there are 6 titles, you can start each of them as if you had stored 6 video tapes in the recorder.

- **To return to the beginning of the title**
  During playback, press QUICK MENU button, then press ▲ / ▼ buttons to select "Restart title," then press ENTER button.

- **To play another title**
  Press the HDD or DVD button to display "CONTENT MENU Title List," then select a title.

You can make the recorder memorize only the very last point, regardless of the number of titles. Set "HDD/RAM title play" (page 121) to "**Serial playback.**"

- **To return to the beginning of the title**
  Press SKIP REV (⏮) button repeatedly until the beginning of the title appears.
- **To play the other title**
  Press SKIP REV (⏮) or SKIP FWD (⏭) button repeatedly.

Notes

- Depending on conditions or contents, playback may not start from the location last stopped at, but instead another location. For example, from the beginning of the disc or title.
- Depending on the disc, there may be a slight difference between the location the recorder memorized and the actual location where playback starts.
- This function is not available on DVD-R/RW discs.
- The resuming function will not work if the write-protect tab is set to "PROTECT" (page 7).

■ To play a recorded title while recording another on the same disc (Recorded Title Play)

During recording, you can play a title recorded on the same disc.

1) **While recording, press HDD or DVD.**
2) **Press ▲ / ▼ / ◄ / ► to select a desired title, then press the ENTER.**
   Playback of the selected title starts.

   Pressing the STOP button stops playback, and the content currently recorded returns. If you press the PLAY button, playback resumes from the location you last stopped.

Notes

- The playback picture may appear after a delay of several seconds.
- While you are using this function, the following operations/ functions are not available.
  - Programmed playback (repeat playback, etc.)
  - Editing (Playlist programming, dubbing, title/chapter naming, etc.)

■ Playing all titles (original/playlist) in a disc

Set "HDD/RAM title play" (page 121) to "Serial playback". You can play all titles in the HDD and DVD-RAM disc in the order of the thumbnails on CONTENT MENU, as if they were recorded in one video tape.

■ Checking the background information on a selected title

1) **At step 2 on page 46, select a title (chapter) then press QUICK MENU.**
   The Quick Menu appears.
2) **Press ▲ / ▼ to select "Title information", then press ENTER.**
   Detailed information of a selected title (chapter) appears. You can switch the chapters in the title by pressing the SKIP REV (⏮) or SKIP FWD (⏭) buttons.

Notes

- From the Quick Menu on the "CONTENT MENU Title Information", you can change the details such as name, genre or time.
- You can protect the title from unexpected erasure (page 43).
- To return to the previous display, press the RETURN button.

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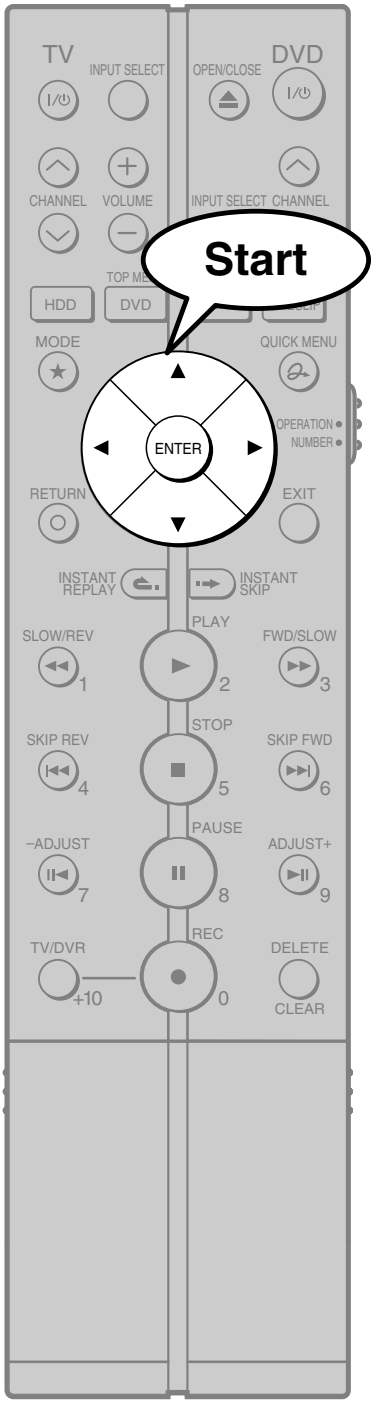
HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Folder function

You can create folders and put increasing recording titles into them to arrange.

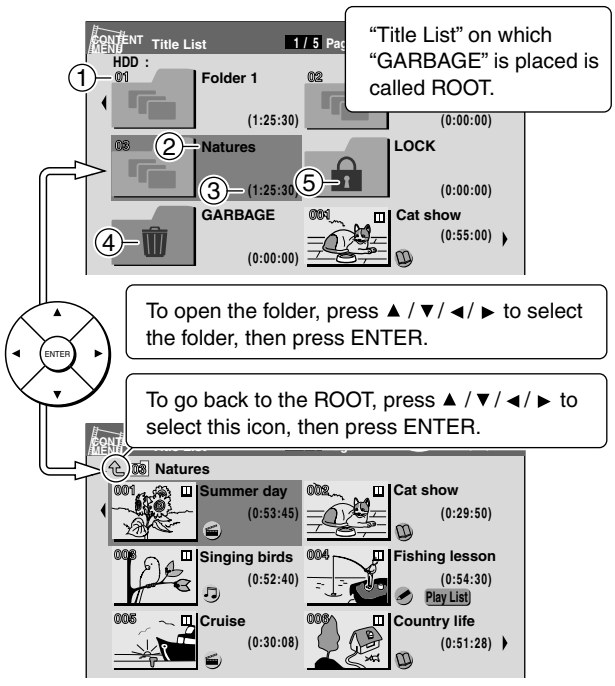


- Each folder can be named such as serial drama, sports, movie or user name.
- Contents in the folder can be protected so that it cannot be operated by others. (“LOCK”)
- You can put titles you want to delete into “GARBAGE” so that you can delete them collectively later.

The following folders are beforehand prepared in the HDD.

“Folder 1”, “Folder 2”, “Folder 3”
“LOCK” (Invisible at factory set)
“GARBAGE”

You can add folders if needed.
You can create new folders also in a DVD-RAM or DVD-R/RW (VR mode).
(“Creating folders”, ⇨ page 51)



① **Folder number**
Folders are displayed in order from the smallest number.
You can change the order.

② **Folder name**
You can change the name. (Depending on condition, it may not work.)

③ **Total time of the recorded titles (Original) in a folder**

④ **“GARBAGE”**

⑤ **“LOCK” (To use this function, you need to select “On” in advance ⇨ page 55)**
You can protect recorded titles.
This function is available only for the HDD.

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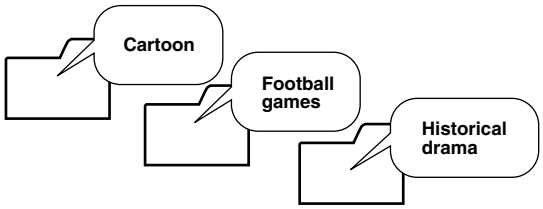
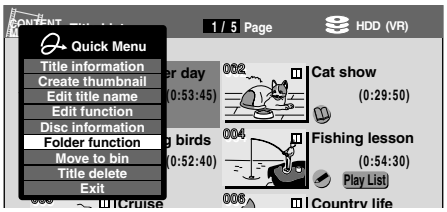
Creating folders

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

The recorder provides 3 folders (“Folder 1”, “Folder 2”, “Folder 3”) for recorded titles.
Including these, a maximum of 24 folders can be created.



1) **Press HDD or DVD to select the drive.**
   HDD: Contents in the HDD
   DVD: Contents in a loaded disc
2) **Press QUICK MENU.**
3) **Press ▲/▼ to select “Folder function”, then press ENTER.**



4) **Press ▲/▼ to select “Folder settings”, then press ENTER.**
   “Folder settings” menu appears.
5) **Press ▲/▼/◄/► to select an untitled folder then press ENTER.**
   A keyboard appears.
6) **Enter a folder name.**
   A maximum of 48 letters can be inputted.
   A name which contains the following words cannot be set;

   root, garbage, lock, no specification
7) **When finished, press MODE.**
   “Folder settings” menu returns. A new folder with the name is created.

Notes
- You cannot create a folder in a folder.
- When programming a timer recording, you can set a created folder for the title to be recorded. (page 34)
- When you copy content in a folder from a loaded disc to the HDD, they are copied on the ROOT. However, if you create a folder of the same name in the HDD then execute copying, the copied contents will be put in the folder of the same name. When copying from DVD-RAM or DVD-R/RW (VR mode) to the HDD, the folder of the same name is created automatically.)
- A DVD-RAM or DVD-R/RW (VR mode) which contains folders created on this recorder may lose the folder assortment or the titles may move onto the ROOT, if it is used on other players (including TOSHIBA products) or PC, etc.

■ To change the folder name

1) **After step 1) of “Creating folders”, press ▲/▼/◄/► to select the folder to change its name, then press QUICK MENU.**
2) **Press ▲/▼ to select “Folder function”, then press ENTER.**
3) **Press ▲/▼ to select “Rename folder”, then press ENTER.**
4) **Repeat steps 6) to 7) of “Creating folders”.**

Note
- If you change the name of a folder you set for a recorded titles of timer recording, the name in “Rec folder” on REC MENU changes automatically.

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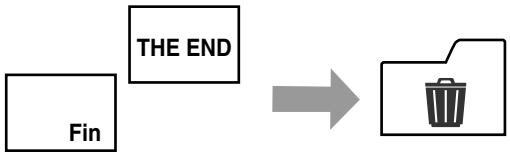
Moving into “GARBAGE”

You can put recorded titles you want to delete into “GARBAGE” so that they are deleted collectively later. The titles are not deleted automatically even though you put into “GARBAGE”. The titles can be moved or played unless “GARBAGE” is emptied.



You cannot move the following contents;
- A chapter only
- A title which is being recorded
- A protected title
- A title in “LOCK” which is locked (page 55)

1) **Press HDD.**
2) **Press ▲ / ▼ / ◄ / ► to select a title you want to put into “GARBAGE”.**
3) **Press QUICK MENU.**
4) **Press ▲ / ▼ to select “Move to bin”, then press ENTER.**
5) **Press ◄ / ► to select “Yes”, then press ENTER.**
   To cancel, select “No”, then press ENTER.

   The lid of “GARBAGE” opens when a title is put in.

Emptying “GARBAGE”

Titles in “GARBAGE” can be deleted collectively. Once you execute the deleting process, it cannot be cancelled.

You cannot execute in the following situations;
- While preparing for a timer recording
- While recording a programme

1) **Press HDD.**
2) **Press ▲ / ▼ / ◄ / ► to select “GARBAGE”.**
3) **Press QUICK MENU.**
4) **Press ▲ / ▼ to select “Empty bin”, then press ENTER.**
   “Empty bin” is not displayed when “GARBAGE” is empty.
5) **Press ◄ / ► to select “Yes”, then press ENTER.**
   To cancel, select “No”, then press ENTER.

Note
- Even though parts of a Playlist are in “GARBAGE”, the Playlist can be played. However, if you empty “GARBAGE”, the parts are deleted from the Playlist.

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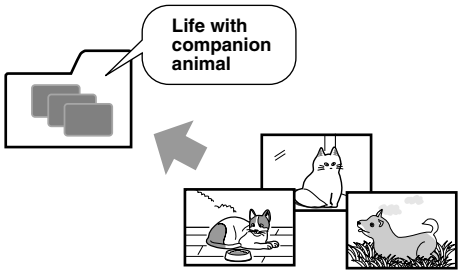
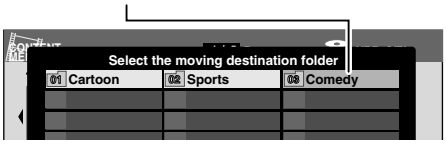
Moving a recorded title into a folder



You cannot move the following contents;
- A chapter only
- A title which is being recorded
- A protected title
- A title in “LOCK” which is locked (page 55)

1) **Press HDD or DVD to select the drive.**
   HDD: Contents in the HDD
   DVD: Contents in a loaded disc
2) **Press ▲/▼/◄/► to select a title you want to move into a folder.**
3) **Press QUICK MENU.**
4) **Press ▲/▼ to select “Folder function”, then press ENTER.**
5) **Press ▲/▼ to select “Move to folder”, then press ENTER.**
6) **Press ▲/▼/◄/► to select a folder in which you want to move the title, then press ENTER.**
   e.g. Moving into “Comedy”



“LOCK”:
Unless you input the security code, the title cannot be played.
Make the setting in advance. See page 55.

“GARBAGE”:
Select if you want to delete titles later. If you select “Move to bin” at step 5), the title is moved into “GARBAGE”. (Available only in the HDD.)

■ Deleting out from a folder

1) **Select a title which you want to take out.**
2) **Press QUICK MENU.**
3) **Press ▲/▼ to select “Folder function”, then press ENTER.**
4) **Press ▲/▼ to select “Move to folder”, then press ENTER.**
5) **Press ▲/▼/◄/► to select “ ”, then press ENTER.**

■ Moving multiple titles into a folder

1) **While displaying a Title List, press QUICK MENU.**
2) **Press ▲/▼ to select “Folder function”, then press ENTER.**
3) **Press ▲/▼ to select “Move multiple to folder”, then press ENTER.**
4) **Press ▲/▼/◄/► to select a title you want to move, then press ENTER.**
5) **Press ◄/► to select a folder in which you want to move the title, then press ENTER.**
   An icon with the folder number appears.
   e.g.

   When set to be moved to folder 03

   To cancel the title, press the QUICK MENU button while selecting the title, then select “Cancel Selected Title”, and press ENTER.
6) **Repeat steps 4) to 5) to select a title and a folder.**
7) **Press ▼ to select “Start”, then press ENTER.**
8) **Press ◄/► to select “Yes”, then press ENTER.**

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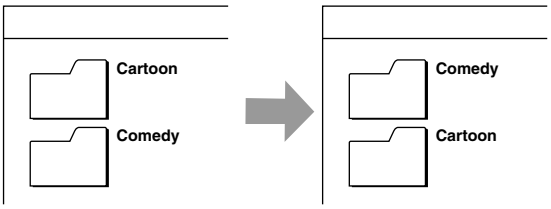
Changing the order of the folders

Folders are displayed in order from the smallest number. You can change the display position by swapping the folder numbers.



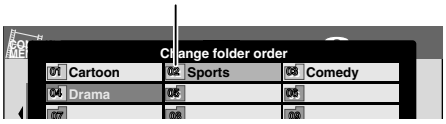
You cannot change the position of the following folders;
- "LOCK"
- "GARBAGE"
- Folders which contain a protected title (Cancel the protection)

1) **Press HDD or DVD to select the drive.**
   HDD: Contents in the HDD
   DVD: Contents in a loaded disc
2) **Press ▲/▼/◄/► to select a folder you want to move.**

e.g. Swapping "04 Drama" and "02 Sports"

3) **Press QUICK MENU.**
4) **Press ▲/▼ to select "Folder function", then press ENTER.**
5) **Press ▲/▼ to select "Change folder order", then press ENTER.**
6) **Press ▲/▼/◄/► to select another folder you want to replace, then press ENTER.**

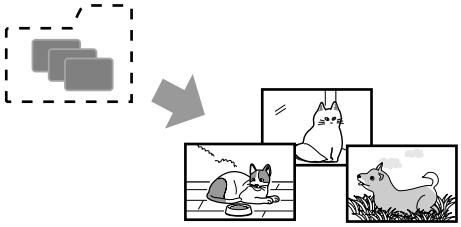
e.g. Selecting "02 Sports"



7) **Press ◄/► to select "Yes", then press ENTER.**
   To cancel, select "No", then press ENTER.

Removing the folder

Unnecessary folders can be removed.
If a folder is removed, it will disappear and all the titles in it will move onto the ROOT.



You cannot remove the following folders;
- "LOCK"
- "GARBAGE"
- Folders which contain a protected title (Cancel the protection)

1) **Press HDD or DVD to select the drive.**
   HDD: Contents in the HDD
   DVD: Contents in a loaded disc
2) **Press ▲/▼/◄/► to select a folder you want to remove, then press QUICK MENU.**
3) **Press ▲/▼ to select "Folder function", then press ENTER.**
4) **Press ▲/▼ to select "Remove folder", then press ENTER.**
5) **Press ◄/► to select "Yes", then press ENTER.**
   To cancel, select "No", then press ENTER.

Note
- It you remove a folder which was designated as a recording folder, all the titles will be displayed on the ROOT.

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Using “LOCK” HDD

“LOCK” is the function to protect the titles. The titles in “LOCK” cannot be deleted or played by others who do not know the security code.

“LOCK” is the only folder as well as “GARBAGE”. You cannot duplicate or rename it either.

To use this function, you need to select “On” in the following setting in advance.

■ Setting of “LOCK”

1) **During stop, press SETUP. (Open the lid of the remote control.)**
2) **Press ◄/► to select “Management settings”, then press ENTER.**
3) **Press ▲/▼ to select “Security folder setting”, then press ENTER.**
4) **Press ▲/▼ to select, then press ENTER.**
   Off:
   Deactivates this function.

   On “show”:
   Activates this function.
   “LOCK” is displayed on the ROOT. You need to input the security code to play the title.

   On “hide”:
   Activates this function. “LOCK” is not displayed on the ROOT. The operations such as playback or deletion cannot be performed.
5) **Input the four-digit security code by pressing number buttons, then press ENTER.**
   To input digits, set the OPERATION/NUMBER switch to “NUMBER”.

   If you inputted wrong number, press the CLEAR button to input again before pressing the ENTER button.

   If you forget the security code or you want to cancel it, press the STOP button 4 times, then press the ENTER button.

Notes
- It you change the setting from “On (show)” or “On (hide)” to “Off”, all the titles which are in “LOCK” will move onto the ROOT.
- Even though parts of a Playlist are in “LOCK”, the Playlist can be played.

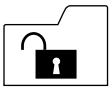
■ Operating “LOCK”

“LOCK” changes its status as follows;

Locked:

You can open this folder.
To play the title, you need to input the security code (or open the Quick Menu while selecting this folder, and select “Folder function” then “Unlock security folder”.

Unlocked:



You can open this folder.
You can select and play (same as normal folders).

To lock the folder:

1) **While selecting “LOCK”, press QUICK MENU.**
2) **Press ▲/▼ to select “Folder function”, then press ENTER.**
3) **Press ▲/▼ to select “Lock security folder”, then press ENTER.**
   The icon changes to the locked form.

Note
- Turning on the recorder locks the unlocked folder.

Invisible:

The folder is not displayed.
Selecting a title is impossible, therefore operation is unavailable.
Input important titles into “LOCK”, and set to “On (hide)”.
The titles are protected from operations by others.

Notes
- All titles in “LOCK” will be deleted automatically by executing “All HDD titles delete”.
- If you execute “All HDD titles delete”, the security code will be cancelled.

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HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Playing a DVD video disc

You can also play VIDEO CDs, audio CDs or finalization processed DVD-R/RW discs (Video mode) in the same manner.
To play recorded contents, follow the instructions on ⇨ page 46.

■ Preparation

- Turn on a TV or audio system and select the corresponding input source that the recorder is connected to.
- Load a disc you want to play. (⇨ page 20)

1 Press DVD.

The DVD indicator on the front panel illuminates.
This status indicates that the recorder is ready to play a disc in the disc tray (DVD mode).

2 Press PLAY.

Playback starts.

- Depending on the disc, playback starts automatically by loading the disc.
- The recorder may take a short time to start playback. This occurs because the recorder is reading the data of a disc.

Note

- DVD video disc provides high resolution pictures and a lot of information. Because of this, you may notice some fine picture noises on TV screen, which you have never seen with regular broadcast TV programme. While the amount of noise depends on the TV you use with the recorder, you should generally reduce the sharpness adjustment on your TV when viewing DVD video discs.

Locating a title using the top menu

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Some DVD video discs may include a top menu, on which you can view the structure of contents or select a scene. Most of the top menus automatically appear in certain scenes, and also are displayed on demand. Actual operation of the top menu depends on the disc. This section explains a general example of how to operate a top menu. Also refer to the instructions of the disc itself.

1) **Press DVD.**
2) **Press ▲ / ▼ / ◄ / ► to select the title you want.**
   If the titles in the top menu are assigned a number, you can directly locate a specific title by pressing its designated number with the number buttons.
3) **Press ENTER.**

Notes

- The instructions above describe basic procedures which may vary depending on the contents of the DVD video disc. If different instructions appear on the TV screen, follow those instructions.
- If you display the top menu during playback and press the DVD button again without selecting any title, the recorder may resume playback from the point where you first pressed the DVD button. (depending on the actual DVD video disc.)
- This method of locating a title is available only on a disc that contains a top menu.
- Instruction notes of discs may refer to the button that displays the top menu as the TITLE button.
- Depending on the disc, the menu is displayed by the MENU button instead of the DVD button.

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■ Selecting the sound

If a disc contains several languages, you can select a preferred language from them to hear.

1) During playback, press AUDIO in the lid.

Each time you press the button, output sound changes.

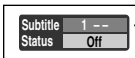
■ Selecting Subtitles

You can display subtitles on the TV screen and select a subtitle language from those included on the disc.

1) Press SUBTITLE in the lid during playback.

The current subtitle setting appears.

e.g.



Setting number and language
The language code appears instead of the language name. Refer to the list of languages and their abbreviations. (page 135)

2) Press ▼ to select "Status," then press SUBTITLE to select "On."

Skip to step 3 if "On" is already displayed.

3) Press ▲ to select "Subtitle," then press SUBTITLE to select a language.

The subtitles of recorded languages appear.

The display turns off after about 3 seconds if you do not make a selection.

• To turn the subtitles on or off

At step 2, select "Off" by pressing the SUBTITLE button.

Notes

- Some DVD video discs are set to display subtitles automatically.
- Depending on the scene, subtitles may not appear immediately after you set the subtitle function to on.
- Some DVD video discs will allow you to change subtitle languages and turn subtitles on or off only via the disc menu.

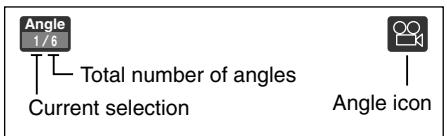
■ Selecting the camera angle

If the scene was recorded with multiple angles, you can easily change the camera angle of the scene you are watching.

1) Press ANGLE in the lid while playing a scene recorded with multiple angles.

While playing a scene recorded with multiple angles, the angle icon appears on the TV screen. Press the ANGLE button while the angle icon is displayed.

e.g.



2) Press ANGLE while the angle number is displayed on the TV screen.

You can also select the camera angle by pressing the ANGLE button several times.

- The angle icon disappears after about 3 seconds if no further selections are made.

Notes

- You can also change the camera angle during still playback. The camera angle changes to the new setting when you resume normal playback.
- If you pause a picture immediately after changing a camera angle, the resumed playback picture may not display the new camera angle.
- Depending on a disc, the camera angle may not change even though the angle number changes.

■ Resuming playback from the location last stopped (Resume Play)

You can resume playback from the location where you stopped.

If you press the PLAY button after stopping playback, playback resumes from the location you have stopped. If you stop playback by pressing the STOP button twice, the resume playback feature will be cancelled.

Notes

- Resume feature cannot function when:
  - you select a disc menu language (page 115) or change the parental lock setting (page 116).
  - you play a PBC-featured VIDEO CD.
  - you open the disc tray.
  - you cancel the DVD-Video finalizing process of a DVD-RW disc.
- There may be a difference in the location where playback resumes depending on the disc.
- While the recorder retains a location in memory, initial setting changes with GUI may function only after the memory is cleared.

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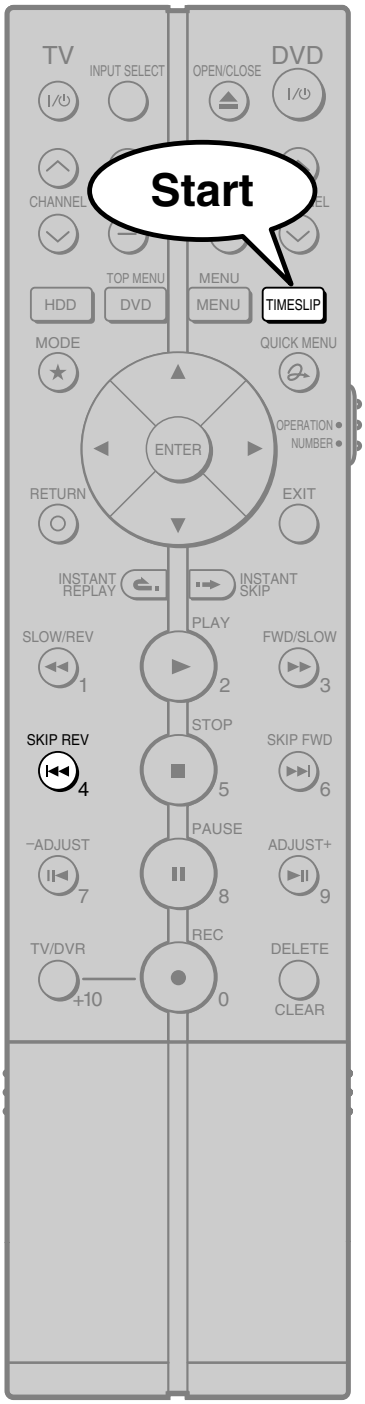
Other playback functions



Playing a TV programme currently being recorded (Chase Play)

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

You can begin playback from the beginning of a programme currently being recorded.
You will find this function of great advantage on long programmes, as you do not have to wait for the end of recording to begin playback.

1) While recording a TV programme on the HDD or a DVD-RAM disc, press TIMESLIP.
The recorder displays a TV program as it is being recorded.

2) Go back to the beginning of the TV program using SKIP REV.
When you go back to the beginning, playback starts automatically.

3) Locate a scene you want through the following operations if necessary.

Fast-forward/fast-reverse:
Press the SLOW/REV (◄◄) or FWD/SLOW (►►) button.

Forward/reverse slow-motion:
First press the PAUSE button then press SLOW/REV (◄◄) or FWD/SLOW (►►).

Forward/reverse frame by frame play:
First press the PAUSE button then press the ADJUST button.

- To resume normal playback, press the PLAY button.
- You can play in fast-forward to within 10 seconds prior to the current broadcast.

4) Press TIMESLIP to exit.
The current broadcast returns.

Notes
- Time slip recording/playback stops when the disc is filled up. You can play up to a location where the recorder stopped the recording. The time slip recording/playback cannot begin if the disc is full.
- The playback picture may appear after a delay of several seconds.
- The playback location will never be identical to the record location in the programme. It will always trail the record location by a few seconds.
- While using time slip recording/playback, you cannot program a recording.
- During the time slip mode, you cannot change the setting of the feature that turns off the recorder after a programmed operation has finished.
- Even while “Auto power off” is selected, the recorder does not turn off if the recording end time comes during playback of a programme being recorded.
- Playback may jump a few seconds back or pause depending on the disc or data condition.

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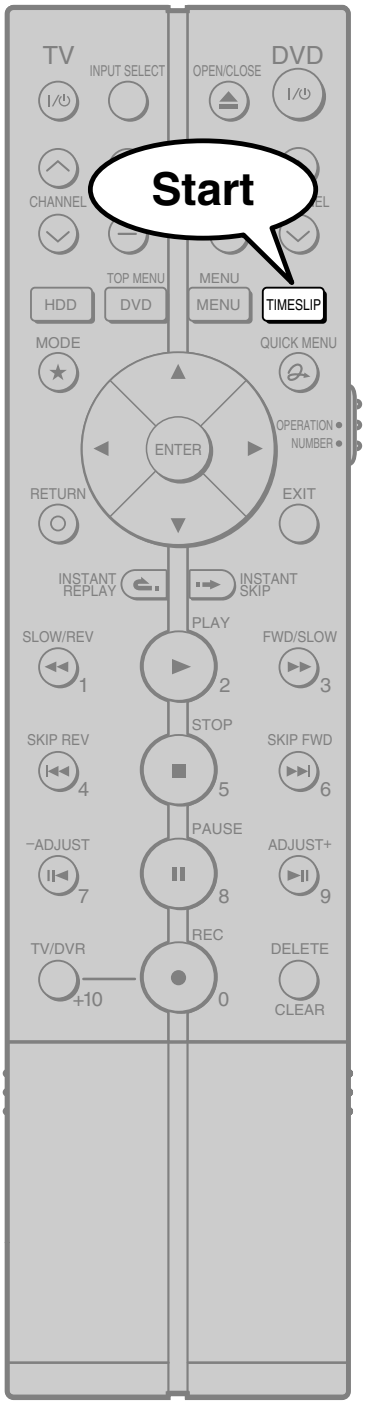

Pausing a TV broadcast to resume later (Pause TV)

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

This function enables you to pause a TV broadcast and resume viewing at a later, more convenient time, by storing the TV broadcast temporarily on the HDD.

1) While viewing a TV broadcast via this recorder or immediately before it starts, press TIMESLIP.

When Pause TV mode is ready, playback starts automatically.
The recorder begins to store the broadcast on the HDD the moment you press the TIMESLIP button.

2) Locate a scene you want by the following methods.

Fast-forward/fast-reverse:
Press the SLOW/REV (◄◄) or FWD/SLOW (►►) button.

Forward/reverse slow-motion:
Press the PAUSE button, then press the SLOW button.

Forward/reverse frame by frame play:
First press the PAUSE button then press the ADJUST button.

- To resume normal playback, press the PLAY button.
- You can play in fast-forward to within 10 seconds prior to the current broadcast.

3) Press TIMESLIP to exit this mode.

The recorder stops storing the broadcast on the HDD.
A message appears and asks you whether you will save the stored data or erase it.
Press the ◄ / ► buttons to select, then press the ENTER button.

Notes

- This function is not available during recording.
- Pause TV recording stops when the HDD is filled up. It will not begin if the HDD is full.
- While using this pause TV recording, you cannot program a recording.
- Playback may jump a few seconds back or pause depending on the disc or data condition.

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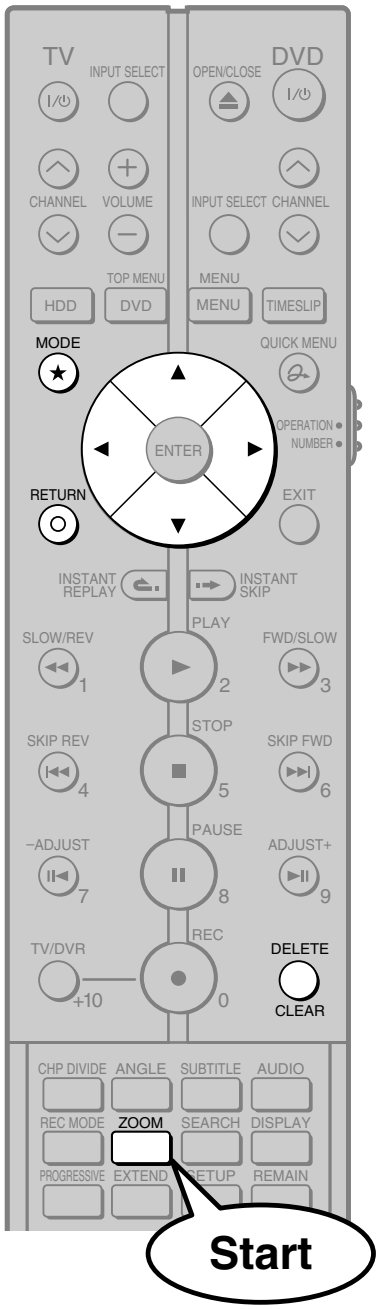
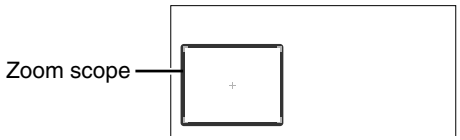


Zooming a picture

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

You can magnify areas within a picture.

1) Press ZOOM in the lid.
A zoom scope appears.



2) Select a zoom point and magnification level.

MODE :
Raises the magnification level.

RETURN :
Lowers the magnification level.

▲ / ▼ / ◄ / ► :
Moves the zoom point. (only after the image has been magnified)

CLEAR (Set “OPERATION/NUMBER” switch to “NUMBER”) :
Returns the zoom point to the center of the picture.

Notes

- Some discs may not respond to zoom feature.
- During some scenes, the buttons may not work as described.
- The zoom feature is canceled when the disc menu is operated.
- The magnification level varies depending on the picture size you select (page 36, in “INSTALLATION GUIDE”).
- The zoom feature is not available while displaying on the screen menu.
- The zoom feature is canceled when you stop playback or start playback.

■ To cancel the zoom

Press ZOOM.

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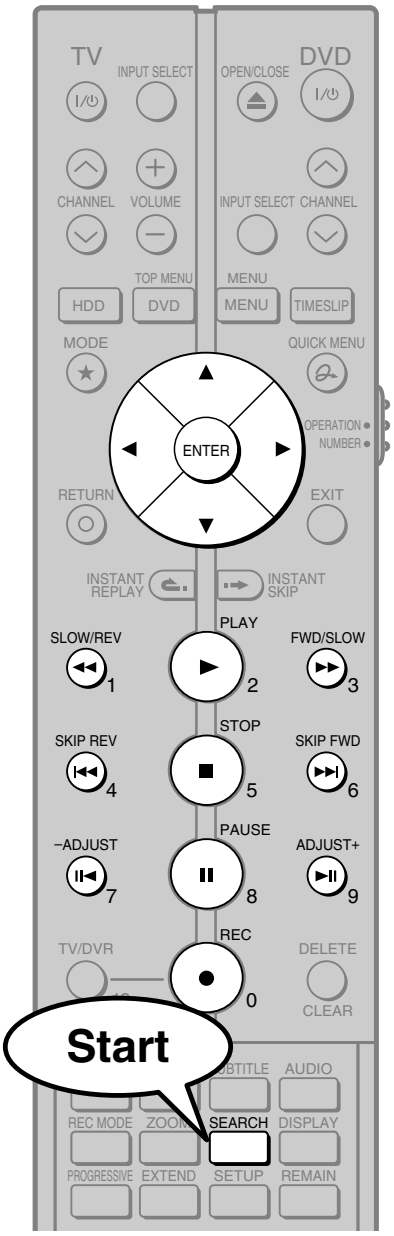


Locating by entering the number of a desired section

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Normally titles, chapters, and tracks are numbered. By entering these numbers, you can access a desired section.

1) Press SEARCH in the lid.

e.g.

If you are using a VIDEO CD/audio CD, skip step 2.

2) Press ▲ / ▼ to select a section (title or chapter) you want to locate.

e.g.

When you want to locate a chapter.

3) Press the number buttons to enter a number of the section.

When entering numbers, set “OPERATION/NUMBER” switch to “NUMBER”.

e.g. To enter 25, press “2”, then press “5”.

4) Press ENTER.

Notes

- Pressing CLEAR button resets the numbers. To clear the display, press SEARCH button several times (depending on a disc).
- This method of locating a title is available only on a disc that contains title numbers.
- If a title is erased, the numbers of the following titles decrease respectively.
- When you record a new title (Original) on the HDD or a DVD-RAM disc, it is added prior to current titles (Playlist), and each following title (Playlist) reference number will advance by a factor of 1.

Locating a specific point by entering its elapsed time (Time Search)

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

1) Press SEARCH in the lid.

You may have to press repeatedly, depending on a disc. Press the button until the following display appears.

e.g.

2) Press the number buttons and ◄ / ► to enter the desired time location on the disc.

When entering numbers, set “OPERATION/NUMBER” switch to “NUMBER”.

e.g. To enter 1 hour, 25 minutes, and 30 seconds

“0” → “1” → “►” → “2” → “5” → “►” → “3” → “0”

hour minute second

3) Press ENTER.

Notes

- Some discs may not respond to this process.
- Some scenes may not be accessed precisely as you specified.
- This method for accessing specific locations is available only within the current title of the HDD or a DVD-RAM/R/RW/DVD video disc or within a current track of a VIDEO CD/audio CD.
- Pressing CLEAR button resets the numbers.

Selecting the sound

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

You can select a preferred language and a sound format.

1 Press AUDIO in the lid during playback or while receiving a broadcast.

AUDIO

The current audio setting appears.

The language code appears instead of the language name. Refer to the list of languages and their abbreviations. (page 135)

2 Press AUDIO while the audio setting is displayed on the TV screen.

AUDIO

Variation of channels depends on the disc or the type of TV broadcast.

• HDD | DVD-RAM | DVD-RW (VR) | DVD-R (VR), TV channel signals

Stereo sound
→ “Stereo” (left channel and right channel)
→ “Stereo L” (left channel)
→ “Stereo R” (right channel)
(→ Back to “Stereo”)

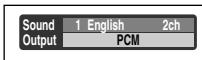
Dual Mono sound (NICAM)
“Dual L” → “Dual R” → “Dual LR” (→ Back to “Dual L”)

The following discs can be switched by pressing the AUDIO button in the lid.

DVD-RW (Video) | DVD-R (Video) | DVD-VIDEO

Language name / sound recording system / No. of channels

e.g.



• VCD

“Stereo” → “Stereo L” → “Stereo R” (→ Back to “Stereo”)

The display turns off if you do not operate for more than 3 seconds.

If you press the ▲ / ▼ buttons to select “Output,” you can select the audio output setting (page 119) by using the ADJUST button.

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Notes

- Some discs allow you to change audio selections only via the disc menu. If this is the case, press the MENU button and choose the appropriate language from the selections on the disc menu.
- When you turn on the recorder or replace a disc, the recorder returns to the initial default setting. (page 115) Depending on the disc, the sound that is specified the disc is played back.
- Immediately after you have switched sounds, there may be a temporary discrepancy between the display and actual sound.
- The DIGITAL AUDIO OUT COAXIAL jack may not output NICAM Mode I/II sound you select. In this instance, set “Audio out select” to “PCM”. (page 119)
- You cannot change NICAM sound if recorded with “DVD compatible mode” (page 28) set to “On”. Even when “DVD compatible mode” (page 28) is set to “Off,” the recorder regards it as “On (Mode I)” when recording to a DVD-R/RW disc video mode.

Recorded sounds

According to your setting of “NICAM” on the setup menu screen, (page 119), the sound is recorded onto different channels of the disc below. Set “NICAM” to “On” or “Off” appropriately.

Setting on the setup screen		Type of receiving broadcast	Contents of recorded sound		Type of record
DVD Compatible Mode	NICAM		Lch	Rch	
Off	Off	Mono + NICAM L, R	Mono	Mono	Stereo
		Mono + NICAM M1, M2	Mono	Mono	Stereo
		Mono + NICAM M1	Mono	Mono	Stereo
		Mono	Mono	Mono	Stereo
	On	Mono + NICAM L, R	L	R	Stereo
		Mono + NICAM M1, M2	M1	M2	Dual Mono*
		Mono + NICAM M1	M1	M1	Stereo
		Mono	Mono	Mono	Stereo
On (Mode I)	Off	Mono + NICAM L, R	Mono	Mono	Stereo
		Mono + NICAM M1, M2	Mono	Mono	Stereo
		Mono + NICAM M1	Mono	Mono	Stereo
		Mono	Mono	Mono	Stereo
	On	Mono + NICAM L, R	L	R	Stereo
		Mono + NICAM M1, M2	M1	M1	Stereo
		Mono + NICAM M1	M1	M1	Stereo
		Mono	Mono	Mono	Stereo
On (Mode II)	Off	Mono + NICAM L, R	Mono	Mono	Stereo
		Mono + NICAM M1, M2	Mono	Mono	Stereo
		Mono + NICAM M1	Mono	Mono	Stereo
		Mono	Mono	Mono	Stereo
	On	Mono + NICAM L, R	L	R	Stereo
		Mono + NICAM M1, M2	M2	M2	Stereo
		Mono + NICAM M1	M1	M1	Stereo
		Mono	Mono	Mono	Stereo

* This will be “Stereo” when a recording is made with “L-PCM” selected.

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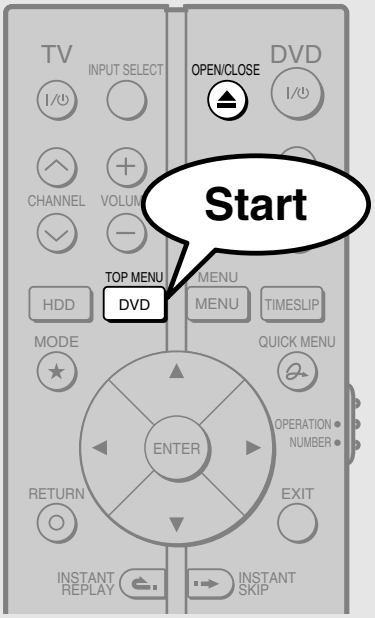
Viewing JPEG files

You can play JPEG files that have been recorded on a CD-R or CD-ROM on the recorder.

■ Preparations

- Prepare a compatible disc (page 65) that contains JPEG files you want to view.
- Set “Priority contents” (page 121) to “Photo”.
- Make your TV shape conform to the 4:3 aspect ratio. Only 4:3 pictures can be played regardless of the function settings via the on-screen displays of the recorder (page 36, “INSTALLATION GUIDE”). If the TV is adjusted to other sizes, e.g. “WIDE,” images will appear to be horizontally expanded. For details, refer to the owner’s manual of your TV.



1 **Press DVD.**

2 **Load a CD that contains JPEG files.**

Each photo appears for about 3 seconds (slide show).

If a slide show does not start, press the PLAY button.

Depending on the disc, the “CONTENT MENU Picture List” appears. See “On the “CONTENT MENU Picture List”” (page 65) to operate.

Notes

- Some files may not display their own entire images depending on the size.
- JPEG picture playback is not available during recording on the HDD.
- Operation to JPEG file will be disabled at about 5 minutes before a programmed recording starts.

■ To stop playback (slide show)

Press STOP.

If you press the PLAY button after pressing the STOP button, playback will start from the photo you stopped.

■ To pause playback (slide show)

Press PAUSE.

To resume, press the PAUSE button again or press the PLAY button.

■ To skip photos

During playback, press SKIP REV or SKIP FWD repeatedly.

▶▶| : To skip forward.

|◀◀ : To skip backward.

■ To rotate a picture

Press ANGLE repeatedly.

Each time you press the button, the picture rotates by 90° degree.

Notes

- The rotated image is displayed after its original posture appears momentarily.

■ To magnify a picture

Follow the procedure on page 60.

Notes

- The magnified image is displayed after its original posture appears momentarily.
- For small pictures, the reduction level may be limited.

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■ Viewing a specified photo (single view)

Full screen still view.
2 ways are available:

● On the "CONTENT MENU Picture List"

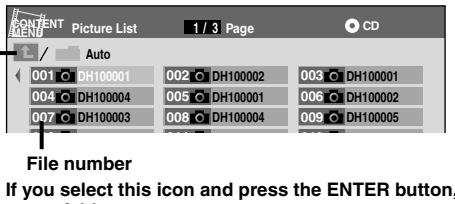
1) Press DVD.

The "CONTENT MENU Picture List" appears.

Depending on the disc, the recorder creates either temporary folder, "Auto" or "All".

"Auto": For CD of which compatibility confirmed by TOSHIBA. Only playable files are listed.

e.g.

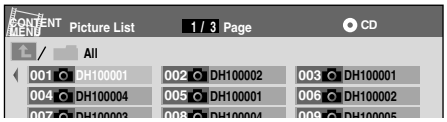


File number

If you select this icon and press the ENTER button, upper folders appear.

"All": For CD other than above. All files are listed.

e.g.



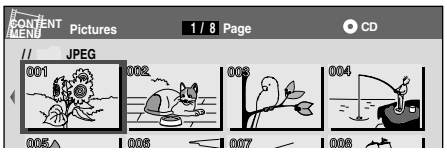
• Some CDs may not comply with the above.

2) Press ▲ / ▼ / ◄ / ► to select a folder or photo.

Pressing the SKIP REV or SKIP FWD button turns the pages.

If you press the MODE button, the list changes to thumbnail view ("CONTENT MENU Pictures").

e.g.



Pressing the ANGLE button rotates the picture. The rotation of pictures is kept until the CD is ejected.

To return to the previous list, press the MODE button again.

3) Press ENTER.

If you select a folder at step 2), repeat steps 2) and 3) until your favorite file appears.

The selected photo appears in full screen.

Notes

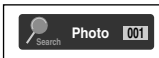
- The "CONTENT MENU Picture List" cannot show all the files in a disc, but only ones regarded as objects of regular play of the disc.
- The larger the file size is, the longer the thumbnail takes time to appear.
- Letters of a file/folder name overflowing the given space are not displayed.

● Direct input of a photo number

1) During playback or stop, press SEARCH.

An input window appears.

e.g.



2) Input a photo number using the number buttons or ADJUST.

3) Press ENTER.

The selected photo appears in full screen.

■ To change the playback order

1) Press QUICK MENU.

2) Press ▲ / ▼ to select an item, then press ENTER.

To shift the cursor, press the ▲ / ▼ buttons.

Reverse : To reverse the order.
Repeat : To repeat the current folder.

Playback in the selected mode starts.
If it does not start, press PLAY.

● JPEG files compatibility

Discs whose compatibility with this recorder has been confirmed by TOSHIBA are as follows.

CANON QuickCD
FUJICOLOR CD
Kodak Picture CD
NORITSU QSS CD

JPEG disc compatibility with this recorder is limited as follows:

- Playable discs:
  CD-ROM, CD-R
  CD-RW is not recommendable.
- CD physical format:
  Mode 1, Mode 2 XA Form 1
- File system:
  ISO9660 Level 1, 2 or Joliet
- File name:
  A file name should be in alphabet and numerals only, and must incorporate "JPG" extension.
  e.g."********.JPG"
- Total number of folders:
  Less than 256
- Total number of files:
  Less than 1000

Some files may not display their own entire image depending on the size.

Some discs may not permit this operation. Especially, the following conditions of included files will increase the disc's disability.
1. Pixels over 5000 x 5000 in height and/or width
2. File format except Exif

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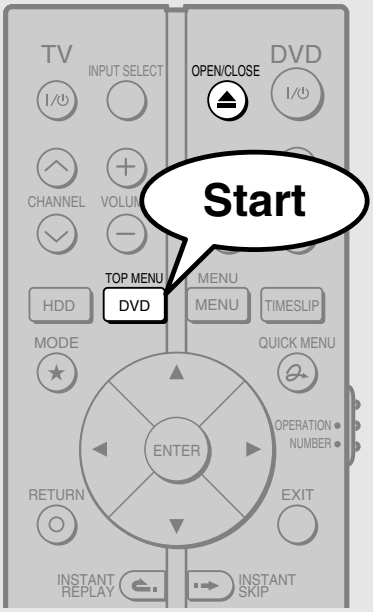
Playing MP3 files

You can play MP3 files that have been recorded on a CD-R or CD-ROM on this recorder.

■ Preparations

- Make sure that a disc you want to play is compatible with this recorder. See ⇨ page 67.
- Set “Priority contents” (⇨ page 121) to “Audio”.



1 Press DVD.

2 Load a CD that contains MP3 files.

Playback starts from the first track of a current folder.
If playback does not start, press the PLAY button.

Notes

- The DIGITAL AUDIO OUT COAXIAL jack outputs MP3 sounds in the linear PCM format regardless of the current “Audio out select” (⇨ page 119) selection.
- You cannot change the playback speed of MP3 playback.

■ To stop playback

Press STOP.
If you press the PLAY button after pressing the STOP button, playback will start from the beginning of the track.

■ To pause playback

Press PAUSE.
To resume, press the PAUSE button again or press the PLAY button.

■ To skip tracks

During playback, press SKIP REV or SKIP FWD repeatedly.

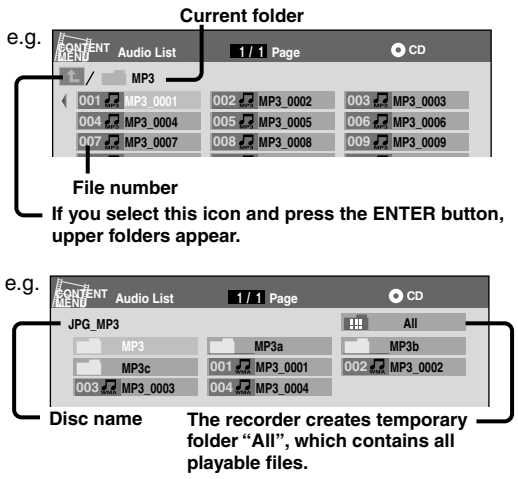
▶▶| : To skip forward.
|◀◀ : To skip backward.

■ Selecting a track in the disc

2 ways are available:

<u>On the “CONTENT MENU Audio List”</u>

1) Press DVD.
The “CONTENT MENU Audio List” appears.



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2) **Press ▲ / ▼ / ◄ / ► to select a track or folder.**
Pressing the SKIP REV or SKIP FWD button turns the pages.

3) **Press ENTER.**
If you select a folder at step 2), repeat steps 2) and 3) until your favorite file appears.

Notes
- The "CONTENT MENU Audio List" cannot show all the tracks in a disc, but only ones regarded as objects of proper play of the disc.
- Letters of a file/folder name overflowing the given space are not displayed.

Direct input of a track number

1) **During playback or stop, press SEARCH.**
An input window appears.

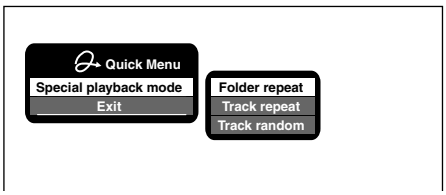
e.g.

2) **Input a track number using the number buttons or ADJUST.**
3) **Press ENTER.**

■ To change the playback order

1) **During playback or stop, press QUICK MENU.**
2) **Press ▲ / ▼ to select "Special playback mode", then press ENTER.**

e.g.



3) **Press ▲ / ▼ to select an item, then press ENTER.**
Folder repeat : To repeat the current folder.
Track repeat : To repeat the current file.
Track random : To play files in the current folder in a random order.

Notes
- To cancel these modes, stop the playback or select the cancel command from the Quick Menu.

● Playable files

MP3 disc compatibility with this recorder is limited as follows:
- Playable discs:
  CD-ROM, CD-R
  CD-RW is not recommendable.
- Sampling Frequency / Bitrate:
  MP3: 8 kHz, 11.025 kHz, 12kHz, 16 kHz, 22.05 kHz, 24 kHz / 8-160 kbps (CBR), VBR
  32 kHz, 44.1 kHz, 48 kHz / 32-320 kbps (CBR), VBR
- CD physical format:
  Mode 1, Mode 2 XA Form 1
- File system:
  ISO9660 Level 1, 2 or Joliet
- File name:
  A file name should be in alphabet and numerals only, and must incorporate "MP3" extension.
  e.g."********.MP3"
- Total number of folders:
  Less than 256
- Total number of files:
  Less than 1000

* This recorder supports ID3v2 (ID3 Tag Version 2) of MP3, to display text data such as names of title and artist. Some characters may not be displayed properly.

This recorder requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3 files). Given the fact that technology in this area is still maturing, Toshiba cannot guarantee that all genre of recordable discs will produce optimal playback quality. The technical criteria set out in this owner's manual are meant as a guide only.

Customers should also note that permission is required in order to download MP3 files and music from the internet. Toshiba has no right to grant such permission. Permission should always be sought from the copyright owner.

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Checking the current status and settings

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

You can confirm operational status and setting details.

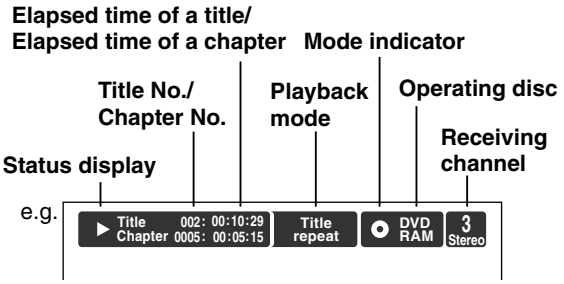
● Operational status and setting details

1 Press DISPLAY.

DISPLAY

The following on-screen display appears. (The actual display varies depending on the disc.)

e.g. while playing a DVD-RAM disc

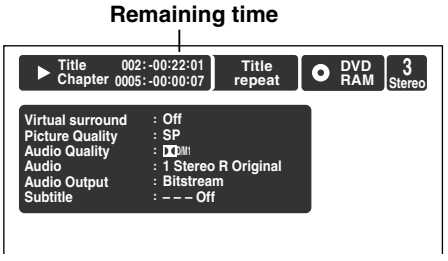


2 Press DISPLAY again.

DISPLAY

An expanded display appears.
(Actual display varies depending on the disc.)

e.g.



3 Press DISPLAY again to turn the display off.

DISPLAY

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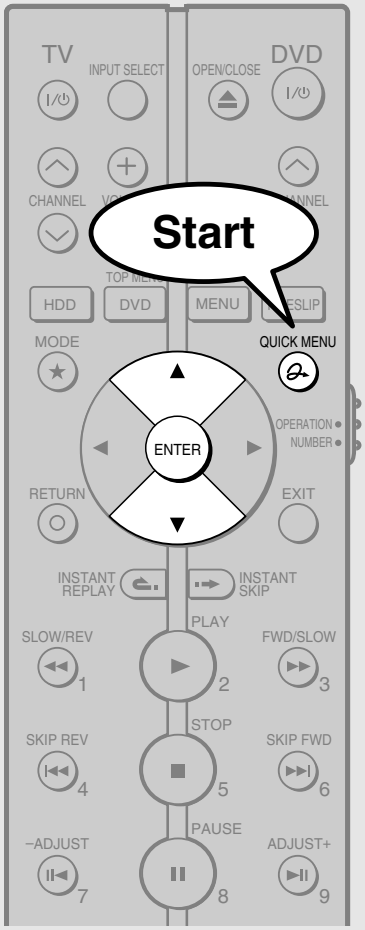
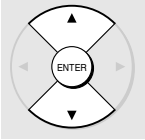
● Using the time bar

The time bar shows the current progress in playback or recording.



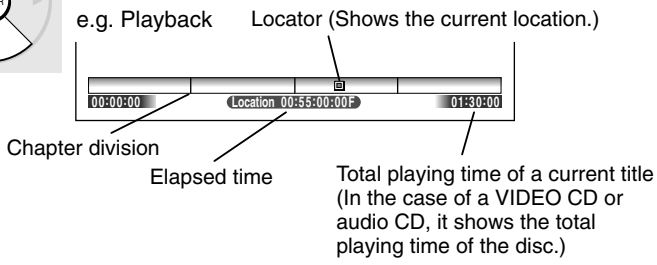
1 **During playback or recording, press QUICK MENU.**

2 **Press ▲/▼ to select "TimeBar", then press ENTER.**

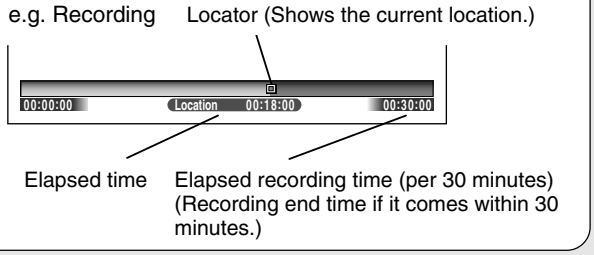


The time bar appears. (The actual display varies depending on the disc.)

e.g. Playback


Locator (Shows the current location.)
00:00:00
Location 00:55:00:00F
01:30:00
Chapter division
Elapsed time
Total playing time of a current title (In the case of a VIDEO CD or audio CD, it shows the total playing time of the disc.)

e.g. Recording


Locator (Shows the current location.)
00:00:00
Location 00:18:00
00:30:00
Elapsed time
Elapsed recording time (per 30 minutes) (Recording end time if it comes within 30 minutes.)

Note

• Time display is an approximation.

■ Changing the location of the time bar

While the time bar is displayed, press ▲/▼.

The time bar shifts up and down.

■ Turning off the time bar

Press QUICK MENU and select "TimeBar" again, then press ENTER.

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Functions in Quick Menu

Besides these examples, various other ones are introduced on respective pages for your convenience. See ⇨ page 24 on how to operate the Quick Menu.

■ To play repeatedly (Repeat playback)

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

You can repeat a desired section.

1) During playback, press QUICK MENU.

2) Press ▲ / ▼ to select "Special playback mode", then press ENTER.

Special playback mode

The sub-menu appears. Select the next item by pressing the ▲ / ▼ buttons and the ENTER button.

Repeat all ORG titles

To repeat all Original titles in a disc.

Title repeat

To repeat the same title.

Chapter repeat

To repeat the same chapter.

A-B repeat

You can designate a portion in a title or track to repeat continuously.
If you select "A-B repeat" and press the ENTER button, the following display appears. Perform steps 1 and 2 below.

e.g.

To cancel the procedure, press the RETURN button.

1) Press ENTER at the beginning of the segment (point A) you want to repeat.
The location of point A is memorized.
The display changes to "Set B".

2) Press ENTER at the end of the segment (point B).
The location of point B is memorized, and repeat playback begins between point A and B.

Track repeat

To repeat the same track.

Disc repeat

To repeat the entire disc.

Repeat all PL titles

To repeat all playlist titles in a disc.

Cancel repeat (in Repeat playback mode)
To resume normal playback.
Playback of the HDD, a DVD-RAM disc or a DVD-R/RW disc (VR mode) stops.

Notes

- Some discs may not permit repeat operation.
- You cannot use the repeat playback function in conjunction with the random playback function.
- If you press the STOP button during repeat playback, this operation is canceled.
- While you are performing repeat playback on the HDD, a DVD-RAM disc or a DVD-R/RW disc (VR mode), operations explained in ⇨ page 48 may not be available.

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■ To check information on a title

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

1) During playback or stop, press QUICK MENU.
2) Press ▲ / ▼ to select “Title information”, then press ENTER.

■ To exit the Quick Menu

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Press QUICK MENU again.

or

Press ▲ / ▼ to select “Exit”, then press ENTER.

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Editing

You can create your own movie from your assembled scenes. Save your favorite videos in DVD discs.

- **Creating your own title**
- **Creating a DVD-Video using DVD-R/RW**
- **Other editing functions**

Creating your own title

You can edit recorded contents.

Note on deleting unnecessary scenes

It is not recommended that you delete many chapters from titles recorded on the HDD to remove unnecessary parts of the titles and copy those contents on a DVD-RAM disc. The reason is that discontinuous space inside the HDD expands and recorded contents are stored in gaps between used locations. Operating this repeatedly makes a recording area inside the HDD broken down into small and complicated spaces. (It is called fragmentation.) Even normal operations may get slow. Moreover, available space may not be restored by deleting or the HDD may have protection disabling playback or recording.
When you want to delete unnecessary parts from titles, collect necessary parts of chapters to make a playlist. Then copy the playlist and delete the original title or the playlist. For example, make a playlist and copy it to a DVD-RAM. Then delete original titles on the HDD. It can save time and effort and retain continuity in the HDD space. However, when moving a copy once program from the HDD to a DVD-RAM disc, delete unnecessary chapters from original titles. For details (⇨ page 88).
Running “All HDD titles delete” regularly prevents fragmentation from occurring.
In addition, if you select and run “HDD format”, all data on the HDD will be erased. Copy TV programs you want to save recorded on the HDD from the HDD to a DVD-RAM or DVD-R/RW disc.

Editing procedure

1: Changing a name of a recorded title (⇨ page 76)

2: Dividing a recorded title into several chapters (⇨ page 77)

3: Collecting necessary chapters (⇨ page 82)

4: Dubbing to save (⇨ page 87)
To save in DVD-R/RW for distribution, see ⇨ page 98.

- **Other editing functions**
  Changing the picture on CONTENT MENU (⇨ page 106)
  Combining two titles (Original) into one (⇨ page 108)

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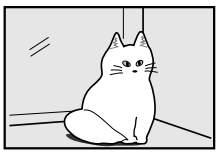
Basic flow

● **Recording a TV program**

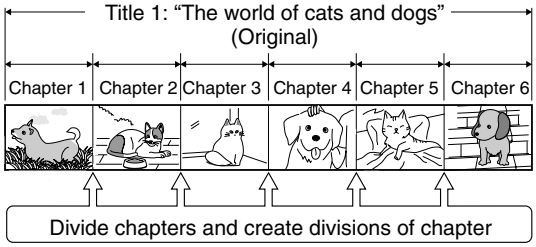
Record a TV program and it becomes an original title.



e.g.
Title: The world of cats and dogs.

● **Chapter editing**

Divide the original title into chapters.

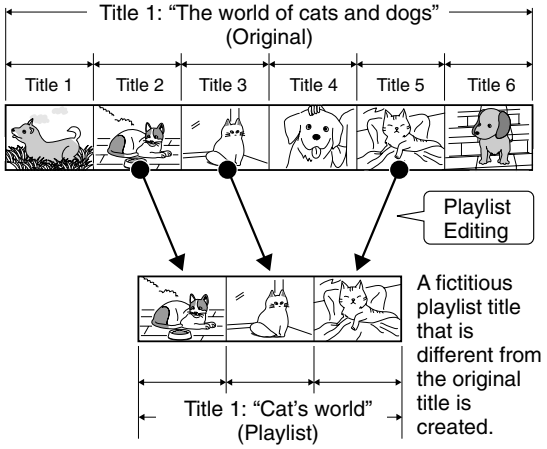


- You can play desired scenes from the top by “Chapter Divide”.
- Divide chapters to edit a playlist.

● **Playlist editing**

Collect your favorite chapters to make them as one title. (Playlist)
If an original title is deleted, a playlist will be also deleted because playlists are fictitious titles.

e.g. Making a playlist by collecting scenes of cats from title 1 “The world of cats and dogs”.



● **Dubbing**

Copy the playlist and it becomes an original title.

Using these editing functions to modify copyrighted content for any purpose other than your private viewing may be prohibited under the Copyright Laws, and may subject you to civil and criminal liability.

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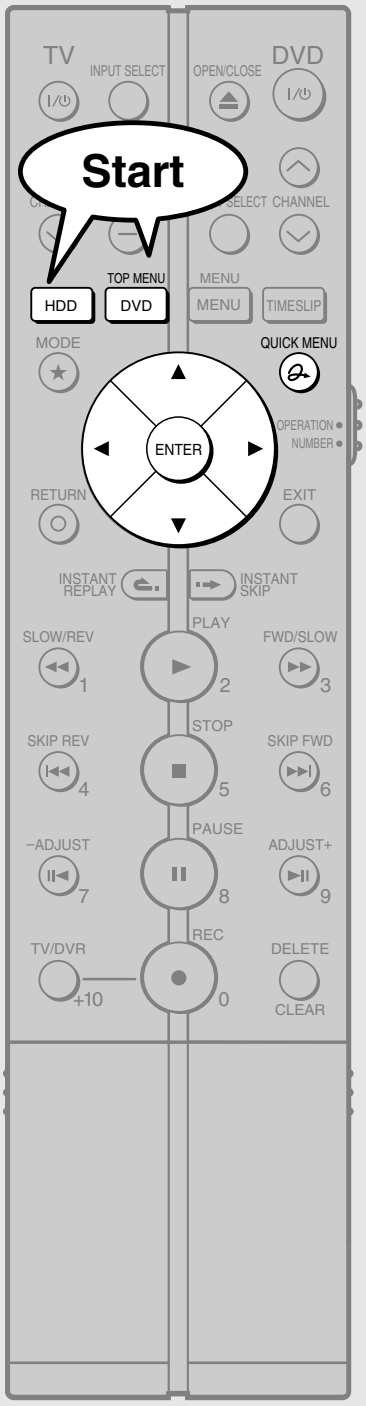
Creating your own title — 1: Changing a name of a recorded title (Continued)

1: Changing a name of a recorded title

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video) DVD-VIDEO VCD CD



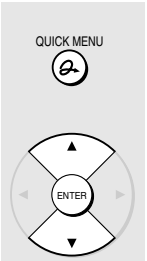
1 Press HDD or DVD to select the drive.

HDD: Contents in the HDD
DVD: Contents in a loaded disc

(Contents recorded on other devices or those in a finalized DVD-R/RW are not displayed.)

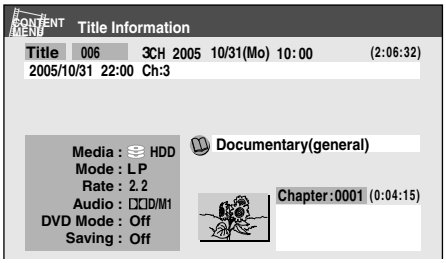
2 Press ▲ / ▼ / ◄ / ► to select a title.

3 Press QUICK MENU then select “Title Information” by pressing ▲ / ▼ from the Quick Menu, then press ENTER.

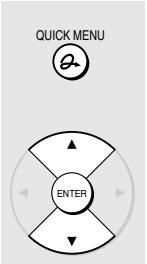


“CONTENT MENU Title Information” appears.

e.g.



4 Press QUICK MENU then select “Edit title name” or “Edit chapter name” by pressing ▲ / ▼ from the Quick Menu, then press ENTER.



The character entry screen appears.

- To change a title name or chapter name, see the steps on page 128.

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2: Dividing a recorded title into several chapters

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

A recording makes 1 title, which includes 1 chapter. By dividing it into several chapters, it will be easier to access a desired scene, and your editing or playback will be much easier.

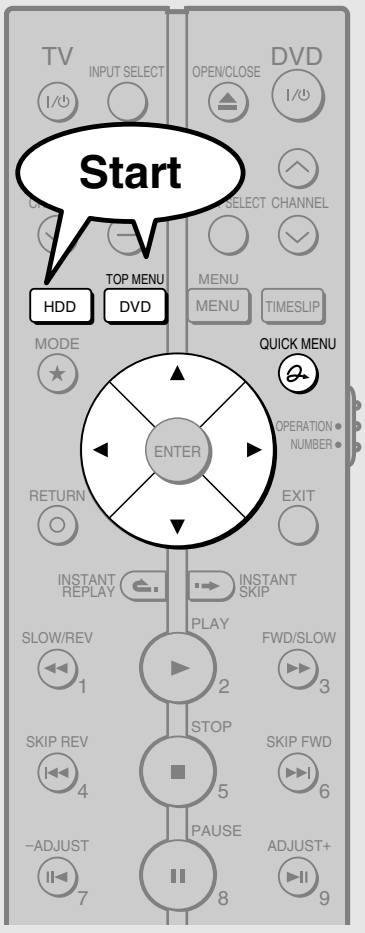
● Simple method

To create chapters in a title, insert a chapter mark. Playback the content, locate a point where you want to divide, then press the **CHP DIVIDE** button in the lid. You can insert a chapter mark also while recording, by pressing the **CHP DIVIDE** button in the lid. (A chapter will also be placed in the recording when you pause.)
The point divides the chapter (into two). You can create multiple chapters by repeating the above operation.

Notes
- Chapters cannot be created in the following modes:
  Dubbing / Fast-reverse, Fast-forward / Slow-motion
- You cannot divide a title of a DVD-R/RW disc (Video mode) into chapters. It is possible to create chapters in a DVD-R/RW disc (Video mode) in the following ways.
  - By pressing the CHP DIVIDE button during recording at the desired points.
  - By selecting an option that inserts chapter marks automatically during recording at regular intervals. (page 28)
  - Recording a programme onto the HDD to make chapter divisions on it, then dubbing the title to a DVD-R/RW (Video mode).

● Precise method

If you want to modify the chapter division, or want to place a chapter mark more precisely monitoring the frame counter, follow the procedures below.

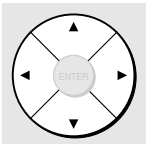


1 Press HDD or DVD to select the drive.

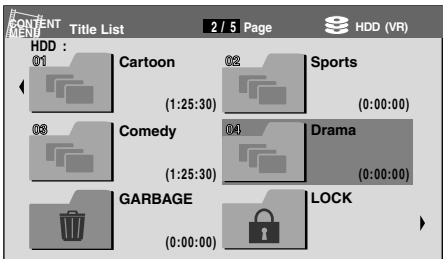
HDD: Contents in the HDD
DVD: Contents in a loaded disc

(Contents recorded on other devices or those in a finalized DVD-R/RW are not displayed.)

2 Press ▲/▼/◄/► to select a title.



e.g.



- The titles in a folder can be edited.

3 Press QUICK MENU.

The Quick Menu appears.

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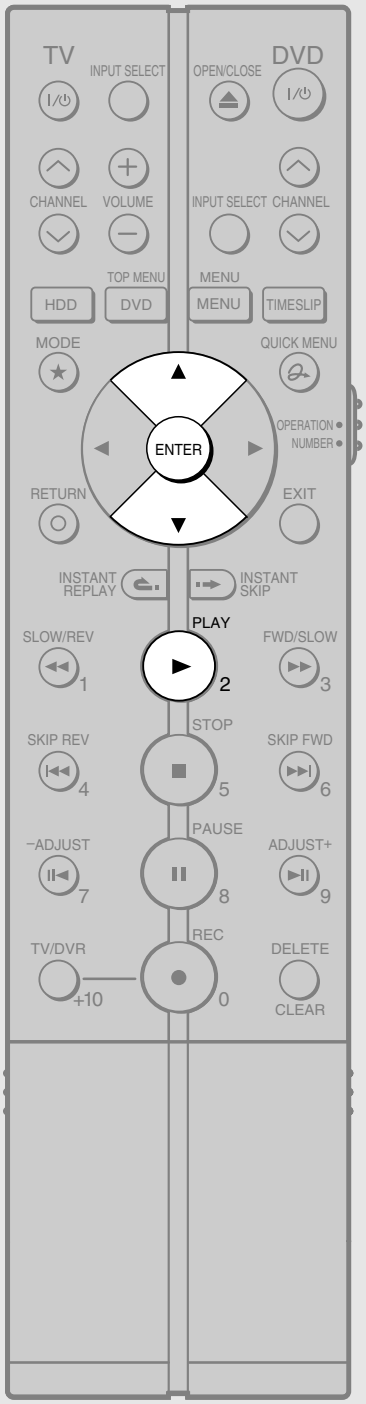
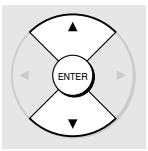
Creating your own title — 2: Dividing a recorded title into several chapters (Continued)

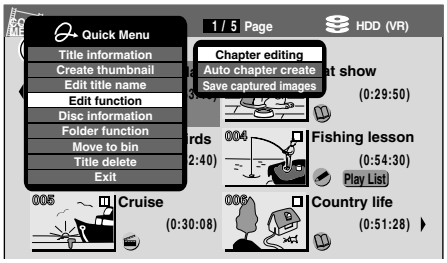


4 Press ▲ / ▼ to select “Edit function”, then press ENTER.

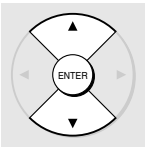


The sub-menu appears.

e.g.

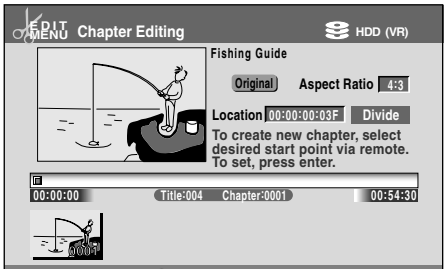


5 Press ▲ / ▼ to select “Chapter Editing”, then press ENTER.



The EDIT MENU Chapter Editing display appears.

e.g.



6 Press PLAY to start playback.

Locate a scene where you want to insert a chapter mark.

You can use the following buttons.
SLOW/REV, FWD/SLOW, SKIP REV, SKIP FWD, PAUSE, ADJUST, etc.

The locator shows the current position on the time bar. And the live video plays in the upper left.

- To access other chapters:
  Press the ▲ / ▼ buttons to move to the thumbnail display, then press the ◄ / ► buttons to select a desired thumbnail.
  To go to the next page, press the SKIP REV or SKIP FWD button.
- You can confirm the first and last scenes of a chapter.
  Select a thumbnail and press the ENTER button.
  3 seconds of the first and last scenes are played.

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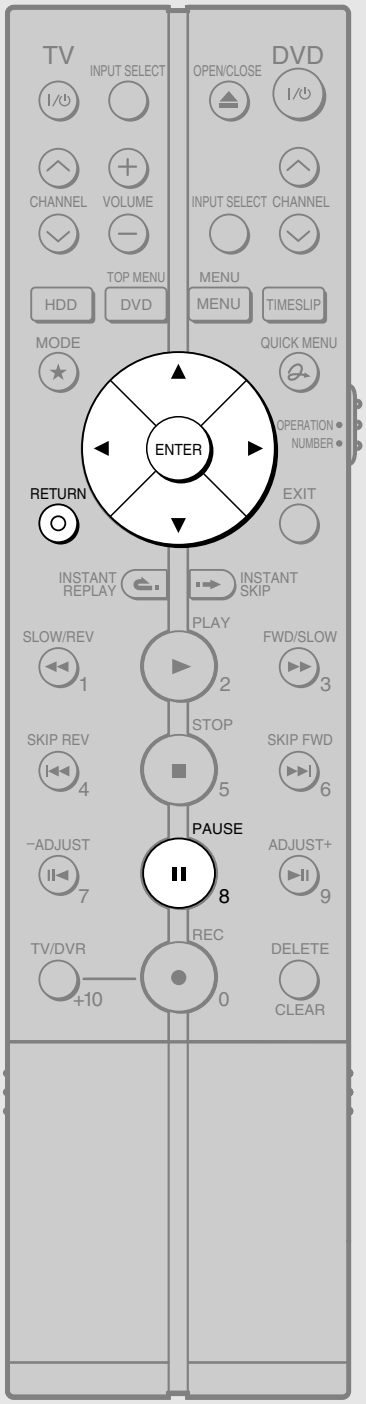
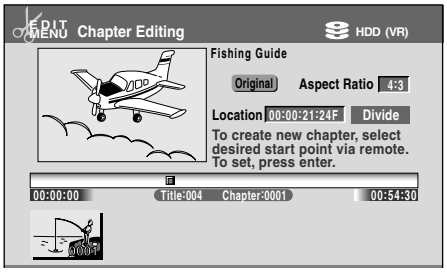


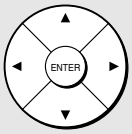
7 At a point where you want to make a chapter division, press PAUSE.

The picture pauses.

e.g.

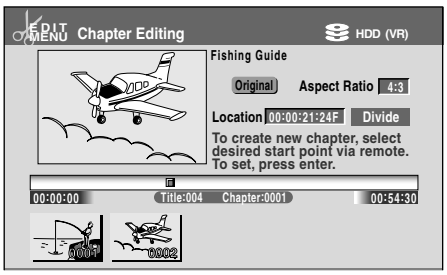


8 Press ▲/▼/◄/► to select “Divide,” then press ENTER.



A chapter division is created at the selected location, and the first scene of the new chapter is registered as a chapter thumbnail. You can also make a chapter division by pressing the CHP DIVIDE button.

e.g.



9 Repeat steps 6 to 8.

Locations of chapter division are indicated by the markers on the time bar.

To erase a chapter division, see “Merging chapters” (page 81).

10 When all chapter divisions have been made, press RETURN.

The recorder displays a message, and starts saving the chapter divisions on the time bar.

When complete, the CONTENT MENU returns.

Notes

- This recorder supports a limited number of chapters on a disc. If exceeded, a message appears. In this event, reduce the number of chapters by merging chapters. (page 81)
- Making chapters in a title (Original) does not affect the related titles (Playlist).
- There may be a small difference between a location you marked and a chapter division actually played.
- Pausing a recording automatically creates a chapter division.
- During relief recording (page 36), a chapter division is automatically created at the start point of relief record.
- If you create chapters in a title which is stored in the HDD and copy the title to a DVD-R/RW (Video mode), the chapter divisions may shift.

■ Creating chapters automatically

You can create chapter marks from the beginning of a title at regular intervals automatically. (Chapter marks are added to those already existing.)
This is convenient for long programs, such as live sports games.

1) Perform steps 1 to 4 on pages 77 to 78.

2) Press ▲ / ▼ to select "Auto Chapter Create", then press ENTER.

3) Press ▲ / ▼ to select a chapter division interval, then press ENTER.

Chapter divisions are automatically marked at the selected intervals.

■ Notes on contents with 4:3 and 16:9 sizes mixed which will be copied to DVD-R/RW (Video mode)

Some content from external sources may contain 4:3 and 16:9 pictures.
DVD-R/RW (Video mode) format cannot record contents in different picture sizes.
When you create chapters in such content to copy them onto DVD-R/RW (Video mode), find a point where 4:3 and 16:9 switches in "Aspect Ratio" and insert a chapter mark there, so that each chapter is either in 4:3 or 16:9 picture size.
There may be a case that the indicated "Aspect Ratio" differs from the actual picture, for example "4:3" displayed at a scene in 16:9 film. This is not a defect, as picture size is registered per unit of 15 frames (0.5 second), which is called GOP, and change of picture size within a GOP is disregarded.

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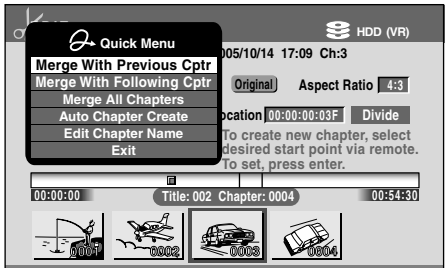
■ Merging chapters

1) **Perform steps 1 to 5 on ⇨ pages 77 to 78, to view the EDIT MENU Chapter Editing display.**
2) **Press ▲ / ▼ / ◄ / ► to highlight a chapter.**
   Pressing the SKIP REV or SKIP FWD button can access preceding or following pages.
3) **Press QUICK MENU.**

e.g.



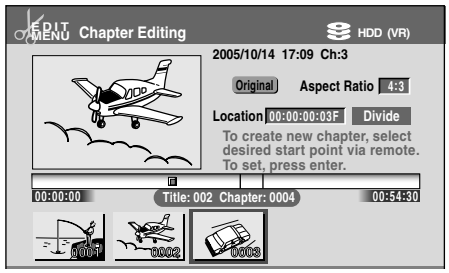
4) **Press ▲ / ▼ to select an item.**
   Merge With Previous Cptr:
   To delete the chapter division between the selected chapter and the previous one.

   Merge With Following Cptr:
   To delete the chapter division between the selected chapter and the succeeding one.

   Merge All Chapters:
   To merge all chapters in the title.
5) **Press ENTER.**

   e.g. When “Merge With Previous Cptr” is selected:
   The selected chapter is merged into the previous chapter and its thumbnail is erased.

e.g.



Notes
- When chapters are merged, the numerical value of following chapters will decrease correspondingly.
- Merging chapters does not affect the related titles (Playlist). You can also merge chapters in the title (Playlist). In this case, the title (Original) is not affected.
- You can access the feature of merging chapters also from the Quick Menu on the “CONTENT MENU Chapter List”.

■ Naming a chapter

1) **From the “EDIT MENU Chapter Editing”, select a chapter which you want to name.**
2) **Press QUICK MENU.**
3) **Press ▲ / ▼ to select “Edit Chapter Name”, then press ENTER.**
   A keyboard appears.
   Enter a name following the on-screen icon guides.

Notes
- You can enter up to 64 characters.
- There is a limit to the number of chapters which can be named. If exceeded, a message appears.
- You can also access the keyboard to enter a chapter name by selecting a chapter with the SKIP REV or SKIP FWD button on the “CONTENT MENU Title Information”, and by selecting “Edit chapter name” from the Quick Menu on the “CONTENT MENU Chapter List”.
- You can change chapter names also on a DVD-R/RW disc, if the disc is not finalized yet.

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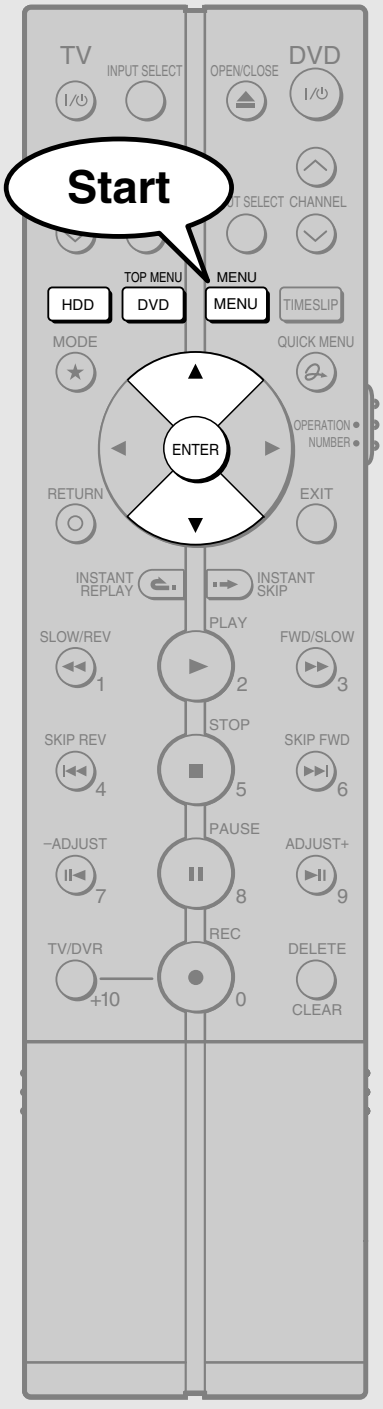
3: Collecting necessary scenes

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

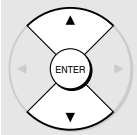
Create a "Playlist" to omit unnecessary scenes for dubbing, or compile desired scenes.



1 Press MENU.

The Menu display appears.

2 Press ▲/▼ to select "Edit programme", then press ENTER.



The EDIT MENU Main Menu appears.

3 Press HDD or DVD to select the drive.

HDD: Contents in the HDD.
DVD: Contents in a loaded disc.

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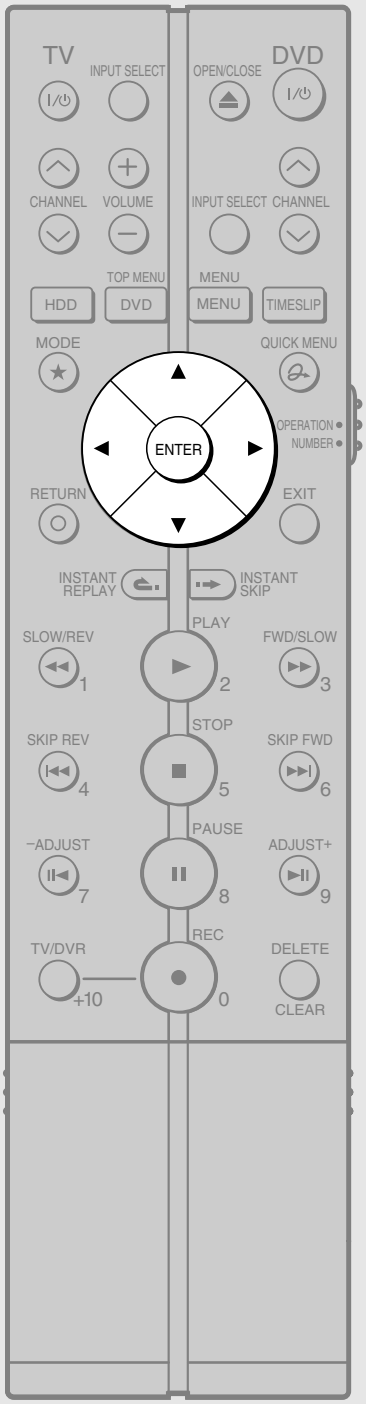
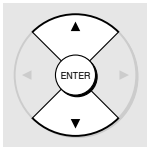
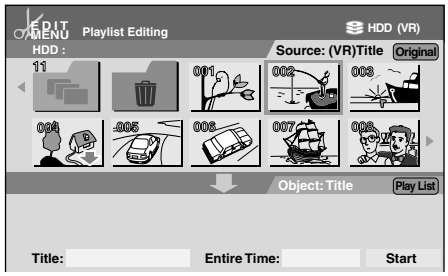


4 Press ▲ / ▼ to select “Create a playlist”, then press ENTER.

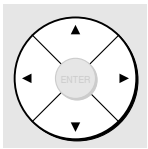


The “EDIT MENU Playlist Editing” appears.

e.g.

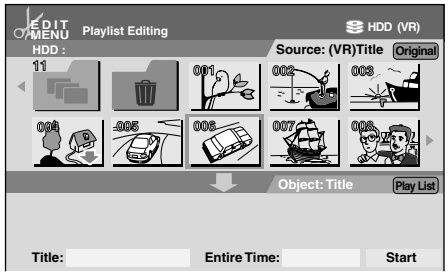


5 Press ▲ / ▼ / ◄ / ► to select a title or chapter.

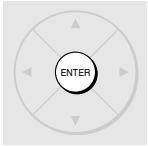


The titles (chapters) in a folder can be selected. To select between titles and chapters, press the MODE button.

e.g.

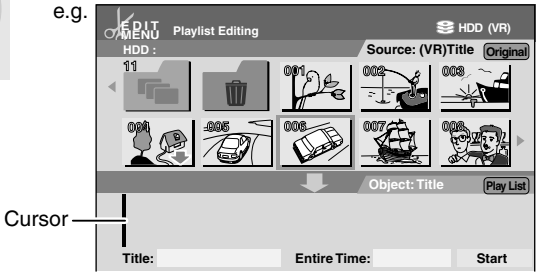


6 Press ENTER.



A cursor appears, indicating the point where the selected item will be inserted.

e.g.



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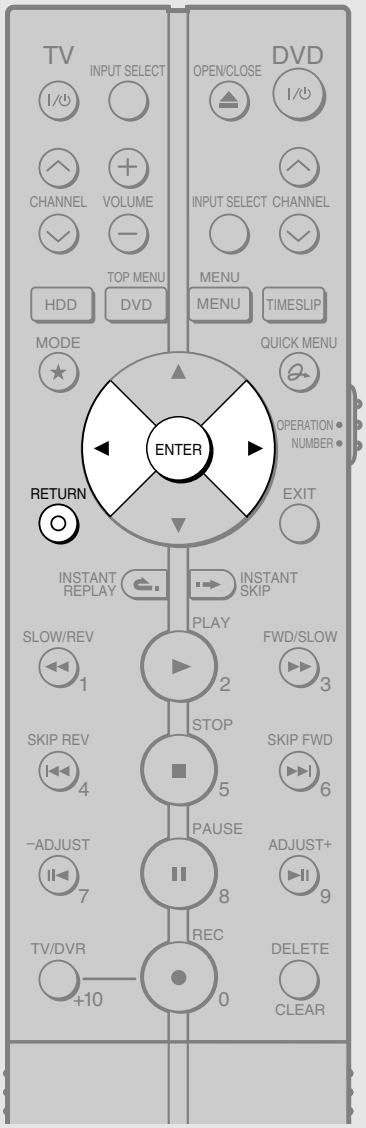
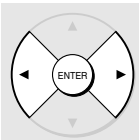
Creating your own title — 3: Collecting necessary scenes (Continued)



7 Press ◄/► to select a point where you want to insert the item, then press ENTER.



If there are no parts in the lower area, leave the cursor to the left and press the ENTER button.

The selected part is inserted at the location of the cursor.

e.g.

8 Repeat steps 5 to 7 to insert items.

To cancel the selection, see “Cancelling selection of a part” (page 105).

9 When all items have been inserted, press RETURN.

The recorder displays a message, and starts saving the Playlist.

When complete, the “EDIT MENU Main Menu” returns.

If the part first chosen is in a folder, the playlist will be created in this folder.

Notes

- If you delete titles and chapters (Original), the corresponding titles and chapters (Playlist) are also deleted. Contrarily, if you delete titles and chapters (Playlist), the corresponding titles and chapters (Original) are not deleted.
- Playback may pause if a gap between the content is played.
- There may be a small difference between the chapter boundary and the actual playback picture.
- A title or chapter which is being edited cannot be selected as an item.
- You cannot add a title of still pictures, or a title or a chapter which contains both still and moving pictures, to a playlist.
- By copying (dubbing) a Playlist, a title (Original) of the same contents is created.
- You cannot program a Playlist of contents recorded on a DVD-R/RW disc (Video mode). To make a Playlist using contents of DVD-RW discs (Video mode), copy them to the HDD beforehand.
- Down arrow on the thumbnails means: Orange: This title already selected. Green trimmed: Some chapters in this title already selected. Green: This chapter already selected.
- A black thumbnail with “Recording” means that the title is being recorded or its recording will start within 15 seconds. This thumbnail cannot start playback.

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■ Cancelling selection of a part

1) **From the "EDIT MENU Playlist Editing", press ▲/▼/◄/► to select a part to cancel.**
2) **Press QUICK MENU.**
   The Quick Menu appears.
3) **Press ▲/▼ to select "Cancel Selected Title", then press ENTER.**
   The part you have selected is cancelled.

■ Confirming the contents of a part or a Playlist

You can play a scene (Preview).

Preview of a part:

1) **At step 5 on ⇨ page 83, select a title or a chapter.**
2) **Press PLAY.**
   To stop playback, press STOP.

■ Confirming the title information

1) **At step 5 on ⇨ page 83, select a title or a chapter, then press QUICK MENU.**
2) **Press ▲/▼ to select "Title Information" then press ENTER.**

■ Using a part in a Playlist also in another Playlist

1) **In play or stop mode of a Playlist title, press MENU.**
2) **Press ▲/▼ to select "Edit programme", then press ENTER.**
3) **Press ▲/▼ to select "Create a playlist," then press ENTER.**
   The "EDIT MENU Playlist Editing" appears.
4) **Press ▲/▼/◄/► to select a part, and press ▲/▼/◄/► to select "Start" then press ENTER.**
   The areas of title name and part selection become blank.
5) **Following the procedures outlined on ⇨ page 83, make a Playlist.**

■ Naming a title (Playlist)

1) **From the "EDIT MENU Playlist Editing", move a cursor to the lower side (selected parts) then press QUICK MENU.**
2) **Press ▲/▼ to select "Edit title name," then press ENTER.**
   A keyboard appears.
3) **Following the procedures outlined on ⇨ page 128, enter a title name.**

Note

- You can name a title also while viewing its information. From the "CONTENT MENU Title List", select a title and press the QUICK MENU button then select "Title Information" by the ▲/▼ buttons and the ENTER button. Further press the QUICK MENU button, and select "Edit title name" by the ▲/▼ buttons and the ENTER button.

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■ Selecting chapters with even or odd numbers

You can select necessary parts at once if they are alternating with unnecessary ones.

1) **On "EDIT MENU Playlist Editing", press MODE to display chapters.**
2) **Press QUICK MENU.**
3) **Press ▲ / ▼ to select "Odd number chapers" or "Even number chapters".**
4) **Press ENTER.**

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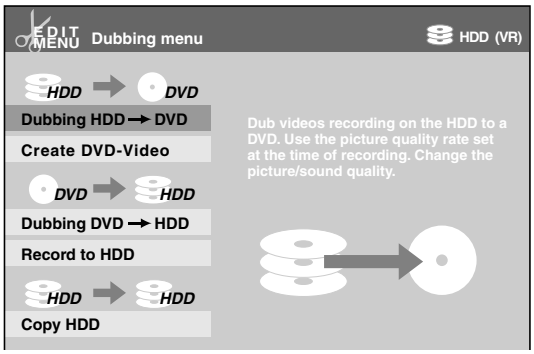
4: Dubbing to save

When you want to dub, press MENU then select “Dubbing”, then press ENTER.



Select the type of dubbing, referring to the introduction on screen.
Proceed to the respective pages for each procedure.

Dubbing HDD→DVD	You can copy/move recorded contents in the HDD to a DVD disc. page 90
Create DVD-Video	You can copy recorded contents in the HDD to a DVD-R/RW (Video mode) to create a DVD-Video disc. page 98
Dubbing DVD→HDD	You can copy recorded contents in a DVD disc to the HDD. page 94
Record to HDD	You can record copy-free contents in a disc to the HDD while playing. Use this method in the following cases; – To copy contents of a finalized DVD-R/RW, to the HDD. – To copy contents of a DVD-R/RW which was recorded on other devices therefore cannot display CONTENT MENU on this recorder, to the HDD. page 95
Copy HDD	You can copy recorded contents in the HDD to make another within the HDD. page 96 Use this method also when you create a new title (Original) from a title (Playlist).

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■ "Copy" and "Move"

This recorder's "Dubbing" has the following two definitions:

Copy:

The original programme remains after the operation is completed.

Move:

The moved programme will be erased from the original location after the operation is completed.

Whether or not you select either command depends entirely on the given situation. The command may be predetermined in some situations.

You cannot "move" contents in the following situations. (Instead, you will want to "copy" them.)

- The content is protected (⇨ page 43).
- A specified portion of the title (chapter) is copy-protected, in which case, you cannot move from DVD-RAM or DVD-R/RW (VR mode) to the HDD.
- You cannot move a Playlist. Only copying is permitted. When you copy a Playlist to a disc, it will be treated an Original on the disc. The original Playlist does not change to an Original.
  Contents in the HDD cannot be moved to DVD-R/RW (Video mode).
  Contents in DVD-R/RW (Video mode) cannot be moved to the HDD either.

Also, you cannot "move" or "copy" contents in the following situations:

- The recorded content contains a programme that permits a single copy only.
- The title (Playlist) contains a portion that prohibits copying. Edit the title from the Original and create a new Playlist.

Notes

- If either the HDD or DVD-RAM is not in optimum physical condition, an error may occur when you execute "Move" and some titles or chapters may be lost. If you want to "Move" non-copy-protected titles and chapters, it is recommended for safety that you first "Copy" them to the opposite drive and confirm they have been copied properly. Then delete the titles and chapters to which you have executed "Move".
- The recorder cannot copy/move the following discs:
  DVD-VIDEO
  VIDEO CD
  Audio CD
  CD-R
  CD-RW
- If you cannot copy/move for some other reason, such as insufficient disc capacity, etc., a message will appear on screen. In such a case, follow the instructions in the message.
- Depending on the content, associated information such as data management may not be copied/moved.
- You cannot copy/move titles containing still pictures.
- Dubbing to DVD-R/RW may divide the original title depending on the contents. Also, the DVD-Video format recording (⇨ page 98) may shift thumbnails.
- A part with aspect ratio 16:9 recorded at bit rate 1.0 Mbps or 1.4 Mbps cannot be dubbed to a DVD-R/RW (Video mode). Change the aspect ratio to 4:3.
- "High speed dubbing" to a DVD-R/RW (⇨ page 90) always comply with "Aspect ratio(Video mode)" setting (⇨ page 28).

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■ Playback and recording during dubbing

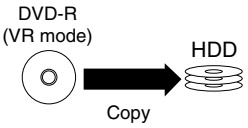
While copying (High speed dubbing), the disc drives (HDD, DVD) can play or record (not possible while moving a file).

- While dubbing from HDD to DVD, HDD can play or record. DVD cannot.
- While dubbing from DVD to HDD, no other operations are available.
- While dubbing from HDD to HDD, DVD can play or record. HDD cannot.
- While dubbing from HDD to DVD, HDD cannot play and record at the same time.
- While dubbing from HDD to HDD, DVD cannot play and record at the same time.
- **Dubbing may be cancelled if the start time of a timer programme recording is reached,** as time programme recording has priority over dubbing.
- While the recorder is performing dubbing and recording at the same time, CONTENT MENU cannot be displayed.

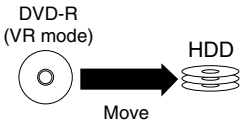
	HDD Playback	HDD Recording	DVD Playback	DVD Recording
HDD→DVD	Yes	Yes	No	No
DVD→HDD	No	No	No	No
HDD→HDD	No	No	Yes	Yes

■ On dubbing from a DVD-R (VR mode)

Copy-free contents recorded in a DVD-R (VR mode) can be dubbed to the HDD. However, please note that moving content does not restore the disc space of the DVD-R (VR mode).



Contents remain in the DVD-R (VR mode) after copying.



Contents are deleted from the DVD-R (VR mode) after moving, but the disc space will not be restored.

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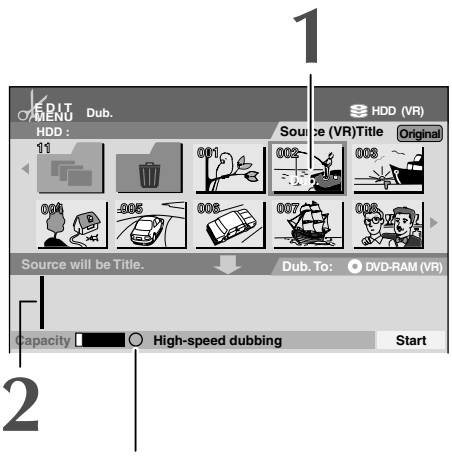
● Dubbing contents in the HDD to a DVD disc

■ Preparation

- Load a disc to which you dub.
- Select “Dubbing HDD→DVD” (page 87), then press ENTER.



You can confirm whether dubbing is possible or not.
O : Can be dubbed.
△ : Can be dubbed in “Fit”.
X : Cannot be dubbed.

- If marked “X”, reduce the contents to dub, by cancelling some parts, etc.
- When you set “Change quality”, the dubbing may be possible by lowering the rate even if marked “X”.

■ Selecting the dubbing mode

1) Press QUICK MENU.

2) Press ▲/▼ to select “Change dubbing mode”, then press ENTER.

Note

- Video mode can record only one of bilingual tracks. If you want to dub bilingual content to DVD-R/RW (Video mode), Select one of tracks from the Quick Menu.
  To record main sound:
  “To fit (main)” or “Change quality (main)”
  To record sub sound:
  “To fit (sub)” or “Change quality (sub)”

1 Press ▲/▼/◄/► to select a title or chapter to copy, then press ENTER.

To turn the page:
Press SKIP REV.
Press SKIP FWD (next page).

To switch the view between titles and chapters:
Press MODE.

2 Press ◄/► to select a location to place the selected part, then press ENTER.

A cursor appears, indicating the point where the selected item will be inserted.
If there are no parts in the lower area, leave the cursor to the left and press the ENTER button. The selected part is inserted at the location of the cursor.

Dubbing modes

●“High-speed dubbing”/ “High-speed moving”
You can copy recorded contents without changing the picture and sound quality. “High-speed” means the dubbing time is shorter than the actual time of the content. Use this mode for normal dubbing. If the disc space is not sufficient for recording of the contents you selected, the recorder automatically switches this mode to “To fit”.

●“To fit”, “Move to fit”, “To fit (Main)”, “To fit (sub)”
If the disc space is not sufficient for recording of the contents you selected, the recorder automatically lowers the picture and sound quality so that the contents fit in the disc space. The minimum rate of this mode is 2.0.

●“Change quality”, “Change quality moving”, “Change quality (main)”, “Change quality (sub)”
Picture and sound quality of your usual selection (page 29) is used to dub. If you switch it to another, use the Quick Menu.

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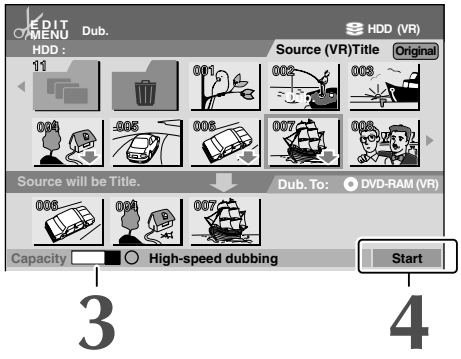

3 Repeat steps 1 to 2.

You can confirm the available space of the destination media via the bar at the bottom of the display.

Each of the collected parts is recorded on the destination media as a title.

4 Press ▼ to select “Start”, then press ENTER.

Read the message, and press ◄/► to select “Yes”, then press ENTER.

Dubbing starts.

If you dubbed onto a DVD-R/RW and you want to play it also on other DVD device, the disc needs to be finalized (writing completion process) on this recorder. Proceed to the next page to finalize the DVD-R/RW.

Note

- Copying of titles or chapters of copy-once content is prohibited. If you select titles or chapters of copy-once content and add those of normal content, copying them is not possible but only moving is available. If you want to copy titles or chapters, do not select titles or chapters of copy-once content. Adding titles or chapters of copy-once content is not accepted.

■ Cancelling during dubbing

Press QUICK MENU to display the Quick Menu.

Press ▲/▼ to select “Cancel dubbing”, then press ENTER.

■ Turning off the power automatically after dubbing

1) **During dubbing, press QUICK MENU.**
2) **Press ▲/▼ to select “Auto power off”, then press ENTER.**

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■ Enabling a DVD-R/RW (Video mode) to which you dubbed contents to be played on other DVD players

It is necessary to finish writing data of the disc (finalizing). Perform the following procedure to finalize the disc.

Important

- You cannot rewrite data onto a disc after you execute the DVD-Video finalizing process. However, the disabled rewritability of a DVD-RW disc can be restored by cancelling the process of the disc (⇨ page 93). On DVD-R discs, cancelling of the DVD-Video finalizing process is not available.
- Cancelling of the DVD-Video finalizing process is available only on DVD-RW recorded or copied contents on this recorder.

1) During playback or stop, press MENU.
The Menu display appears.

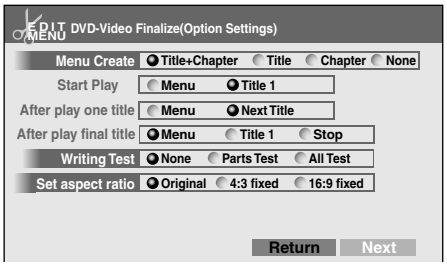
2) Press ▲ / ▼ to select "Edit programme", then press ENTER.
The "EDIT MENU Main Menu" appears.

3) Press DVD, then load a DVD-R/RW disc which you want to finalize.

4) Press ▲ / ▼ to select "Finalize/cancel DVD".

5) Press ENTER.
A display of option settings appears.

e.g.

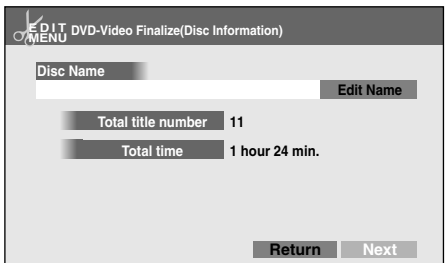


6) Press ▲ / ▼ / ◄ / ► to select.
As you select each item, its function is explained.

When "Menu Create" is set to "None":
"Start play" and "After play one title" are automatically omitted.

7) Press ▲ / ▼ to select "Next", then press ENTER.
Information on data to be processed appears.

e.g.



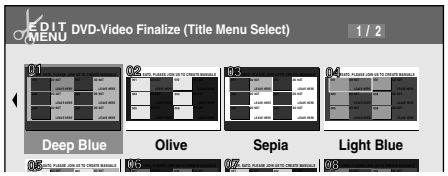
If you press the ▲ button to select "Edit Name" then press the ENTER button, a keyboard appears so that you can enter a title name.

When "Menu Create" is set to "None":
Select "Writing" at the right bottom by the ▲ / ▼ / ◄ / ► buttons and press the ENTER button.
Skip to step 12).

8) Press ▼ to select "Next", then press ENTER.
When "Menu Create" is set to "Title+Chapter" or "Title", a display of title menu selection appears.

To view your captured images (⇨ page 104), go to the next page.

e.g.



If you press the MODE button, you can preview the selected menu. To return, press the RETURN button.

While displaying a preview screen of your captured image, you can access the other menu to correct colour (⇨ page 105) by pressing the MODE button.

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9) Press ▲ / ▼ / ◄ / ► to select the title menu, then press ENTER.

A display of chapter menu selection appears if "Menu Create" is set to "Title+Chapter" or "Chapter" at step 6).

Images you captured ("Save captured images", page 104,) are listed on the next page.

10) Press ▲ / ▼ / ◄ / ► to select the chapter menu.

A selected menu is applied to all chapters. You cannot allocate a menu to each chapter.

If you press the MODE button, you can preview the selected menu. To return, press the RETURN button.

If you press the ▼ button during preview, to select "Return" then press the ENTER button, you can go to the preview of the selected title menu. To return to the preview of chapter menu, press the ▲ / ▼ / ◄ / ► buttons to select a number next to "Chapter Menu" then press the ENTER button.

11) Press ENTER on the "EDIT MENU DVD-Video Finalize (Chapter Menu Select)" display, and select "Yes" by ◄ / ►, then press ENTER.

A message appears to ask you if you want the power to turn off automatically or not when the process is completed.

12) Press ◄ / ► to select "Yes" or "No", then press ENTER.

A message disappears and the finalize process starts.

Notes

- DVD-R/RW discs (Video mode) recorded on this recorder may not be recognized on other devices unless you execute DVD-Video finalizing process to them.
- You can record onto a DVD-R disc additionally to the limit of the disc capacity, unless you execute the DVD-Video finalizing process to it. Deleting of recorded titles is also possible, however, the disc space cannot be restored.
- You can record additional content onto a DVD-RW disc additionally to the limit of the disc capacity unless you execute the DVD-Video finalizing process to it. Deleting of recorded titles is also possible, however, the disc space can be restored only by the volume of the title last recorded.
- On DVD-RW discs, it is possible to cancel the DVD-Video finalizing process or to initialize for a new use.
- If a start time of a programmed recording comes during finalizing process, the recording is made onto the HDD. However, while making a menu, the recording is not executed. Also, when "Relief recording" is set to "Off" the recording will not start.

■ To cancel the finalize process DVD-RW (Video)

You can cancel the DVD-Video finalizing process executed to a DVD-RW disc (Video mode) so that the disc can be recordable again.

1) Press HDD, then press MENU.

The Menu display appears.

2) Press ▲ / ▼ to select "Edit programme", then press ENTER.

3) Press DVD, then load a disc to cancel the finalize process.

4) Press ▲ / ▼ to select "Finalize/cancel DVD", then press ENTER.

5) Read the message, and press ◄ / ► to select "Yes", then press ENTER.

The process starts.

Notes

- While the recorder is ready to start a programmed recording, you cannot cancel the DVD-Video finalizing process.
- You cannot cancel the DVD-Video finalizing process executed on a DVD-RW disc (Video mode) recorded on other device.
- You cannot cancel the DVD-Video finalizing process executed on a DVD-RW disc if the disc is protected.
- Cancelling the DVD-Video finalizing process may shift the thumbnails of titles/chapters.

■ DVD-R/RW (VR mode) finalizing

DVD-R/RW (VR mode) can also be finalized. A finalized DVD-R/RW (VR mode) may be able to be played on other devices which are compatible with VR mode.

1) During stop, press MENU.

2) Press ▲ / ▼ to select "Edit programme", then press ENTER.

3) Press DVD, then load a disc which you want to finalize.

4) Press ▲ / ▼ to select "Finalize/cancel DVD", then press ENTER.

5) Read the message, and press ◄ / ► to select "Yes", then press ENTER.

The process starts.

To cancel finalization

Follow the same procedure as in DVD-R/RW (Video mode). Finalization of DVD-R (VR mode/Video mode) cannot be cancelled.

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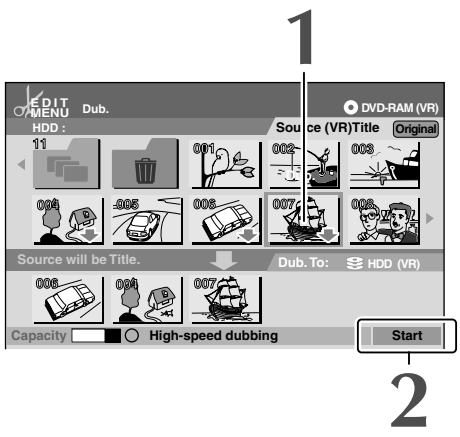
● Dubbing contents in a DVD disc to the HDD

■ Preparation

- Load a disc to which you dub.
- Select “Dubbing DVD→HDD” (page 87)



1 **Perform steps 1 to 2 on page 90, to select a part.**

2 **Press ▼ to select “Start”, then press ENTER.**

Read the message, and press ◄/► to select “Yes”, then press ENTER.

Dubbing starts.

Note

- For options such as dubbing mode selection, see page 90.

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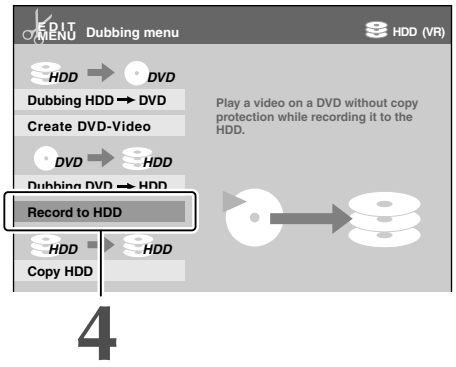
● Recording copy-free content in a disc to the HDD while playing



1 Press MENU.

A menu appears.

2 Load a disc you want to play.

3 Press ▲ / ▼ to select “Dubbing”, then press ENTER.

“EDIT MENU Dubbing menu” appears.

4 Press ▲ / ▼ to select “Record to HDD”, then press ENTER.

Recording starts.

Notes

- A title created by this feature has black pictures at both the beginning and the end of the title. Therefore, thumbnails in the “CONTENT MENU” may be black. To change the thumbnail, see page 106.
- “Record to HDD” is not available on copy-prohibited DVD video discs and audio CD.
- “Record to HDD” is not available on copy-once content.
- While performing this recording, “LineU” appears on the TV screen and “L-U” on the front panel display.
- “Line:U” is given to names of title created by this feature.

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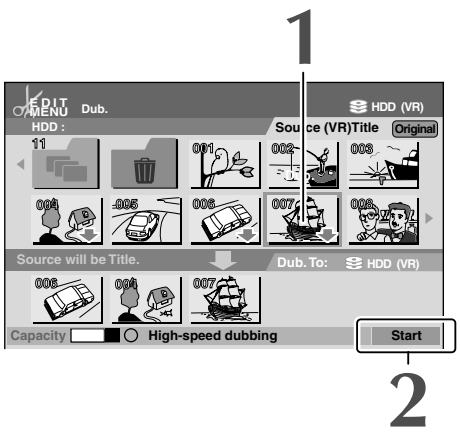
● Copying recorded content in the HDD to create a new title (Original)

Use this method also when you create a new title (Original) from a title (Playlist).



1 **Perform steps 1 to 2 on ⇨ page 90, to select a part.**

2 **Press ▼ to select “Start”, then press ENTER.**

Read the message, and press ◄/► to select “Yes”, then press ENTER.

Dubbing starts.

Note

• For options such as dubbing mode selection, see ⇨ page 90.

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■ Discs and dubbing functions

From	To	High-speed dubbing	To fit	Change quality	Record to HDD
HDD	HDD	Yes	Yes	Yes	No
	DVD-RAM	Yes	Yes	Yes	No
	DVD-R/RW (Unfinalized)	Yes	Yes	Yes	No
DVD-RAM	HDD	Yes	Yes	Yes	Yes
DVD-R/RW	HDD	Yes	Yes	Yes	Yes

- "High-speed dubbing" is not available between the HDD and a DVD-R/RW (Video mode) recorded on other devices.
- "High-speed dubbing" is not available when dubbing to a finalized DVD-R/RW.
- "Record to HDD" is not available on an unfinalized DVD-R/RW (Video mode) which was recorded on other devices.
- The feature for dubbing of contents in folders (see below) does not work on "Record to HDD".

■ Feature for dubbing of contents in folders

It is not possible to designate a receiving folder when dubbing contents in a folder. However, if you beforehand make a folder of the same name on the receiving disc, the contents will be dubbed to the folder. For details, see "Creating folders" (⇨ page 51).

- When a receiving disc is the HDD and there is no folder of the same name on it, the recorder automatically makes a folder of the same name on the HDD and dubs contents to it. If a folder cannot be made for the reason that number of folders already reached the limit, etc., contents are dubbed to the ROOT on the HDD.
- When a receiving disc is a DVD-RAM or DVD-R/RW (VR mode) and there is no folder of the same name on it, contents are dubbed to the ROOT on the HDD.

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HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Creating a DVD-Video using DVD-R/RW

Content stored on the HDD of the recorder can be edited and copied to a DVD-R, a popular media for distribution, and played on a compatible DVD video player. Rewriteable DVD-RW are also available.

Caution

- **Beforehand confirm the content in the disc.**
  If you use a DVD-R, prepare a new one. This DVD-Video creation procedure is possible only once per disc on this recorder. Once you have copied to a DVD-R, you cannot redo it, add, delete, or correct the copied contents in the disc. If you start copying then cancel the job, you cannot re-use the DVD-R.

  If you use a DVD-RW, be sure to confirm contents in it. This procedure overwrites a whole disc, and all contents in a DVD-RW will be lost. If you want to add contents to a DVD-RW, do not use this procedure. Record directly or make a dubbing to the DVD-RW, then execute the finalization (page 92). This procedure includes the finalizing process, and you will not be able to add, delete, or correct contents to a DVD-RW later, as it will have been finalized. If a finalized DVD-RW has remaining space, you can add contents there if you cancel the finalizing process of the DVD-RW (page 93).
- **Do not start copying to a DVD-R/RW when a programmed recording is scheduled to begin shortly.**
  Copying entirely to a DVD-R/RW will take 1 hour and a half (variable depending on the contents). (This does not include time for “Writing Test”. This option requires more time. Actual time for “Writing Test” depends on the contents to test, and may be longer than the playing time of the contents if the disc contains too little contents or too many quality and picture settings, etc.)

  If a start time of a programmed recording comes during this procedure, the recording is made onto the HDD. However, while making a menu theme, the recording is not executed. Also, programmed recordings to DVD media with “Off” setting of “Relief recording” (page 123) are not executed.

  If a programmed recording starts during this procedure, you cannot continue to make one more discs after completion of the first disc.
- **Ensure the compatibility of a disc.**
  Refer to the page 6.
  A finalized DVD-RW (Video mode) can be used, but will be initialized.

* Discs made by this procedure will comply with the DVD-Video standard. However, it is not guaranteed to play properly on all DVD video players (including TOSHIBA products).

Depending on the disc, there may be a difference of data capacity between DVD-R and DVD-RW. It may be possible that contents you have just recorded onto a DVD-R cannot be recorded onto a DVD-RW. (DVD-RW capacity may be smaller.)

- **Follow the instructions on handling of the disc.**

■ Preparation

- Record contents which you want to copy to DVD-R/RW to make DVD-Video, to the HDD with the following settings:
  - “**DVD compatible mode**” (page 28): “**On (Mode I)**” or “**On (Mode II)**”.
- Load a new DVD-R or a DVD-RW. (Follow the instructions on handling of the disc.)
- Press the HDD button to select the HDD mode.

Notes

- If you recorded a title while setting “DVD compatible mode” (page 28) to “Off” or you used another recorder to record a title in a DVD-RAM disc, and you want to copy such a title to a DVD-R/RW to create a DVD-Video, first set “DVD compatible mode” to “On (Mode I)” or “On (Mode II)” then execute the procedure of dubbing (page 87).
- Depending on the disc, DVD-R 4X speed compatibility may be disabled.

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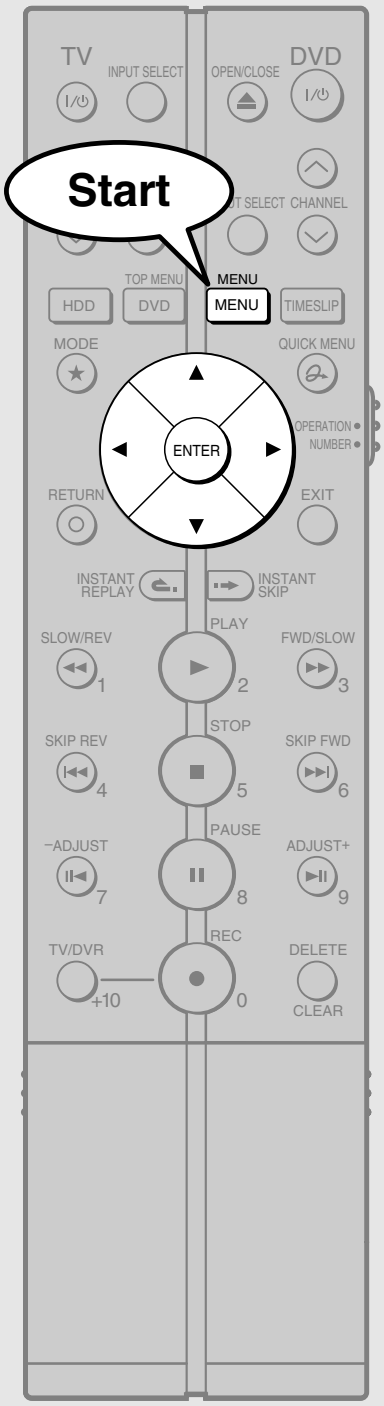
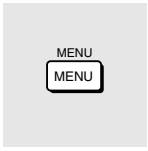
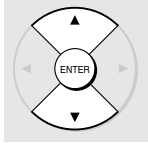


1 Press MENU.



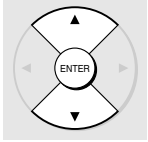
The Menu display appears.

2 Press ▲/▼ to select “Dubbing”, then press ENTER.



The EDIT MENU Dubbing menu appears.

3 Press ▲/▼ to select “Create DVD-Video”, then press ENTER.

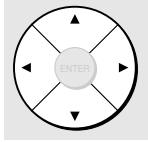


The “EDIT MENU DVD-Video Create (Selected Items)” appears.

e.g.

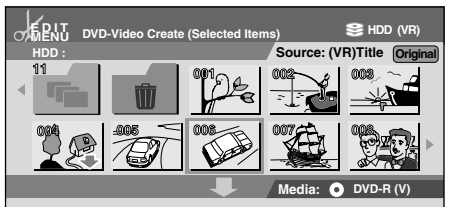
Thumbnails of titles on the HDD are displayed in the upper area.

4 Press ▲/▼/◄/► to select a part (a title or chapter) to copy to the DVD-R/RW.

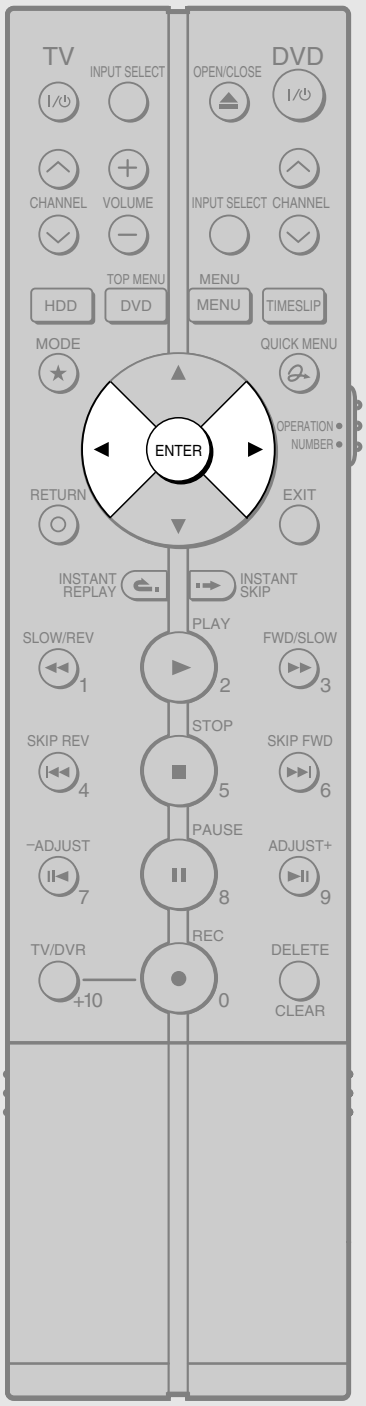


- To go to the preceding or following page, press the SKIP REV (I◄◄) or SKIP FWD (►►I) button.
- To select a chapter, first select the title that contains the chapter you want, then press the MODE button. To return to the title display, press the MODE button again.

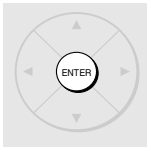
e.g.



(Continued)

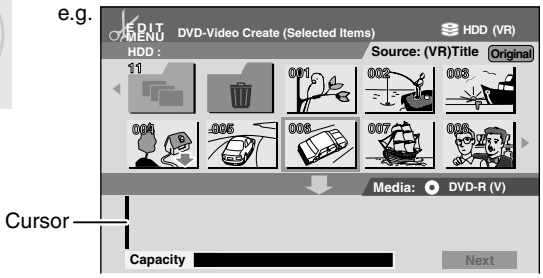


5 Press ENTER.

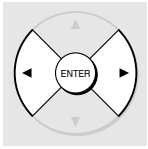


A cursor appears in the lower area (destination media).

e.g.



6 Press ◄/► to select a location to place the selected part, then press ENTER.



If there are no parts in the lower area, leave the cursor to the left and press the ENTER button.

The selected part is inserted into the location of the cursor.

e.g.

7 Repeat steps 3 to 5.

You can confirm the available volume of a DVD-R/RW on the bar at the bottom of the menu.

Each of the assembled parts is recorded onto the destination media as a title.

- To cancel selection of a part, see ⇨ page 105.
- To change the title/chapter name or thumbnail before selection:

1) Select the part that you want to change, and press the QUICK MENU button.
2) Press the ▲/▼ buttons to select “Edit title name” or “Modify title thumbnail” to change the title, or “Edit Chapter Name” or “Modify chapter thumbnail” to change the chapter, and press the ENTER button.
3) Use the entry screen to change the title or chapter name. To change a title thumbnail or a chapter thumbnail, see the steps on ⇨ page 106.

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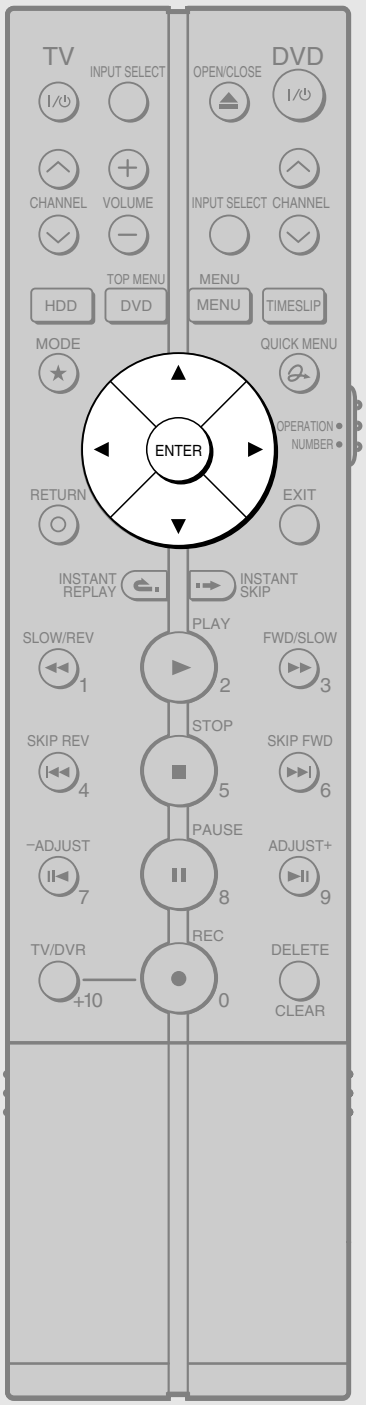
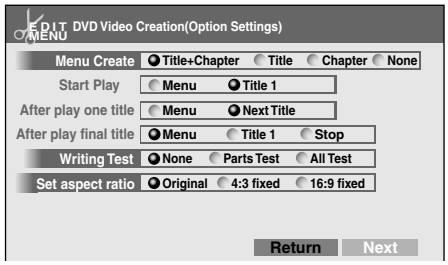


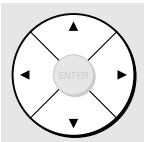
8 Press ▼ to select “Next”, then press ENTER.

A screen is displayed to select options.

e.g.


EDIT MENU DVD Video Creation(Option Settings)
Menu Create Title+Chapter Title Chapter None
Start Play Menu Title 1
After play one title Menu Next Title
After play final title Menu Title 1 Stop
Writing Test None Parts Test All Test
Set aspect ratio Original 4:3 fixed 16:9 fixed
Return Next

9 Press ▲ / ▼ / ◄ / ► to set the items.

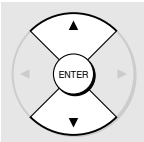


For the instruction of setting, see the description shown at selection.

- When you have selected “Parts Test” or “All Test” for “Writing Test”, extra time is required for pre-writing test. “All Test” requires more time than “Parts Test”. If a DVD-RW is used, the recorder regards “All Test” selection as “Parts Test” to execute the test.

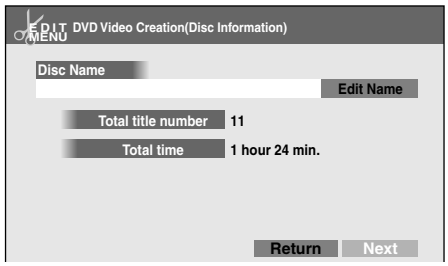
If you select “None” for “Menu Create”:
The setting of “Start Play” and “After play one title” is skipped automatically.

10 Press ▲ / ▼ to select “Next”, then press ENTER.



A screen is displayed to confirm the information you are going to write.

e.g.



Press the ▲ button to select “Edit Name” and press the ENTER button to go to the character entry screen. The number of characters is limited for the disc name you can enter.

If you selected “None” for “Menu Create” at step 9, select “Writing” on the bottom right corner, and press the ENTER button. Skip to step 15.

(Continued)

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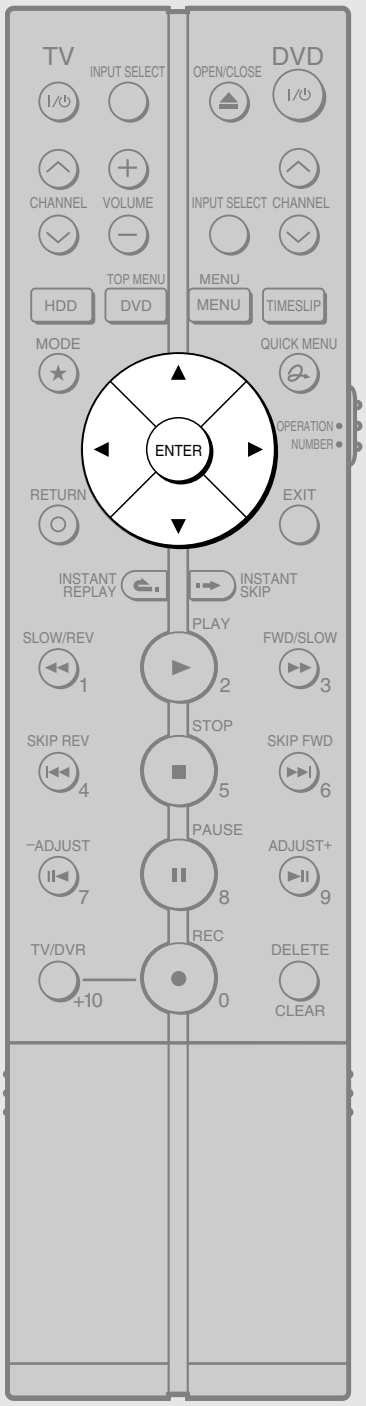
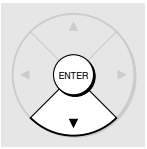


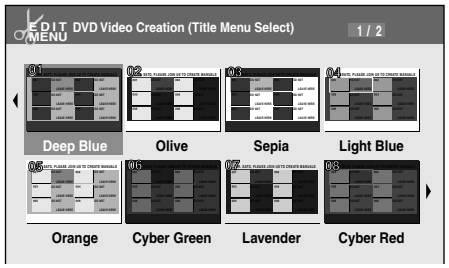
11 Press ▼ to select “Next”, then press ENTER.



A display of title menu selection appears if “Menu Create” is set to “Title+Chapter” or “Title” at step 9.

To view your captured images (page 104), press SKIP FWD to go to the next page.

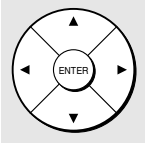
e.g.



If you press the MODE button, you can preview the selected menu. To return, press the RETURN button.

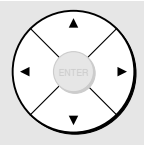
While displaying a preview screen of your captured image, you can access the other menu to correct colour (page 105) by pressing the MODE button.

12 Press ▲ / ▼ / ◄ / ► to select the menu, then press ENTER.



If you have set “Menu Create” to “Title+Chapter” or “Chapter” at step 8, a screen is displayed to select a chapter menu.

13 Press ▲ / ▼ / ◄ / ► to select the chapter menu.



The selected menu is set for all chapters.
You cannot set it for each chapter individually.

If you press the MODE button, you can preview the selected menu. To return, press the RETURN button.

If you press the ▼ button to select “Return” while previewing and press the ENTER button, you will return to the preview of the title menu. To go back to the chapter menu, press the ▲ / ▼ / ◄ / ► button to select a number next to “Chapter Menu” on the bottom center.

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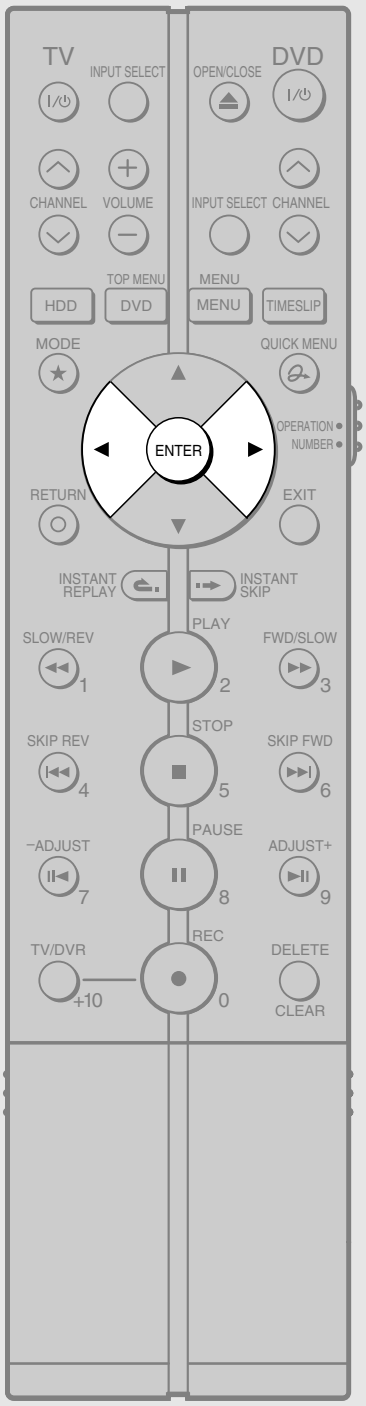
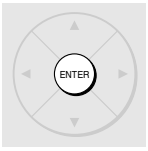
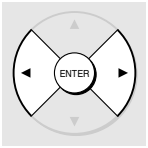


14 Press ENTER on the "EDIT MENU DVD Video Creation (Chapter Menu Select)" display.



A confirmation message is displayed.

15 Press ◄/► to select "Yes", then press ENTER.



The current broadcast picture appears and dubbing starts. The progress is displayed on the screen and in the front panel display on the recorder.

When copying is completed, a finalizing process follows. This enables the disc to be played on a DVD video player.

When the process is completed, a message "Create another DVD-Video now?" appears (except when "Auto power off" (see below) is set). If you select "Yes", you can make one more DVD-R/RW of the same content. If you select "No", you can complete creating the DVD-Video.

- You can set the recorder to turn off automatically when the job finishes.
  1) During the job, press the QUICK MENU button.
  2) Press the ▲/▼ buttons to select "Auto power off".
  3) Press the ENTER button.

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Notes

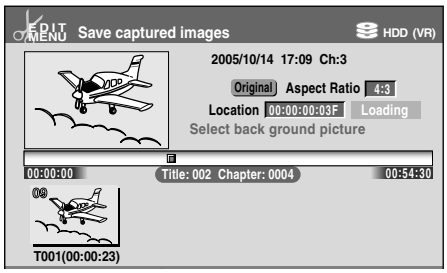
- The number of titles that you can write on a DVD-R/RW (Video mode) is limited (99 titles. Each title should have 99 chapters or less). If you have a large number of titles or chapters, you may not be able to write due to the limitation of the DVD specifications. Also, even if the number of titles and chapters is within the limit, you may not be able to write if you have a large number of menu items.
- Due to standard differences, the number of chapters and their position may change slightly after DVD-Video creation. (For chapters generated on the DVD-R/RW (Video mode), the same thumbnail for the Original chapter is displayed.)
- Due to standard limitation, DVD-R/RW (Video mode) may contain unnecessary scenes after creation.
- If you select items of various types of video outputs, aspect ratios or other properties, or if you select an item recorded with different settings, they may be divided into titles. (For titles generated on the DVD-R/RW (Video mode), the same thumbnail for the Original title is displayed).
- Content based on a complicated Playlist or composed of too many items may not be copied properly.
- Copy-once permitted contents cannot be copied to a DVD-R/RW (Video mode), even if they are recorded onto the HDD while "DVD compatible mode" is set to "On (Mode I)" or "On (Mode II)" (page 28).
- Content recorded on a recorder other than this recorder (including TOSHIBA products) cannot be copied to a DVD-R/RW (Video mode) using High speed dubbing. First set "DVD compatible mode" to "On (Mode I)" or "On (Mode II)", then perform "Change quality dubbing" (page 90) to copy the disc contents to the HDD.
- When a content is recorded with manual rate 1.0 Mbps or 1.4 Mbps and is including a 16:9 picture shape scene, the DVD creation of the content may failure. In this case, set "Set aspect ratio" to "4:3 fixed" on the menu "(Option Settings)".
- Even if the title is recorded with "DVD compatible mode" set to "On (Mode I)" or "On (Mode II)", using a recorder other than this may cause failure when recording to a DVD-R/RW.
- If the DVD-R creating fails to be completed, most of the discs cannot be used again.
- If an error occurs while a DVD-Video is created, the error code "ERR**" (** indicates the error code) is shown in the front panel display of the recorder. (page 133) To clear this display, press the DISPLAY button.
- There may be a difference between a specified thumbnail of menu in the DVD-Video creation procedure and the one on displayed in the "CONTENT MENU".

■ Using a favorite scene as a menu

You can select favorite scenes from the recorded contents and use them as menus of DVD-Video Created (page 98) DVD-R/RW.

1) **During stop or playback, press HDD or DVD to select the drive.**
2) **Press ▲/▼/◄/► to select a title which contains a scene to use as menus.**
3) **Press QUICK MENU.**
4) **Press ▲/▼ to select "Edit function", then press ENTER.**
5) **Press ▲/▼ to select "Save captured images", then press ENTER.**
6) **Select a scene.**
   Locate a scene using the buttons such as PLAY, SLOW/REV, FWD/SLOW, ADJUST or PAUSE, etc.
7) **Press ▲/▼ to select "Loading" and press ENTER.**

e.g.



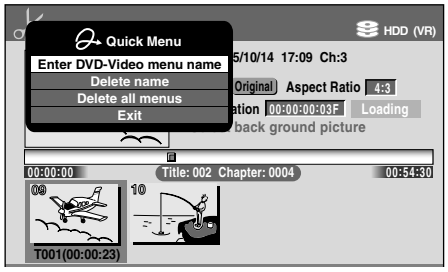
Note

- You cannot capture copy-protected contents.
- The maximum number of pictures which can be saved varies depending on the data size.

● To name a captured image

Press ▲/▼/◄/► to select an image to name then press QUICK MENU. Press ▲/▼ to select "Enter DVD-Video Menu Name" then press ENTER.

e.g.



The on-screen keyboard appears.
Enter a name.

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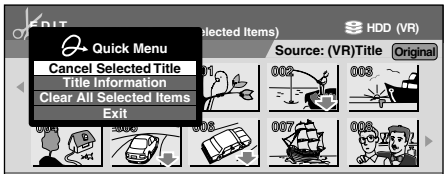
● **To delete a captured image**
Press ▲/▼/◄/► to select an image to delete then press QUICK MENU. Press ▲/▼ to select "Delete Menu" then press ENTER. Follow the message to operate.

To delete all captured images, select "Delete all Menus".

■ Cancelling selection of an item

1) Press ▲/▼/◄/► to select an item then press QUICK MENU.
The Quick Menu appears.

e.g.



2) Press ▲/▼ to select "Cancel Selected Title" (or "Clear All Selected Items" for cancelling selection of all items at a time).

3) Press ENTER.
The selected item disappears.

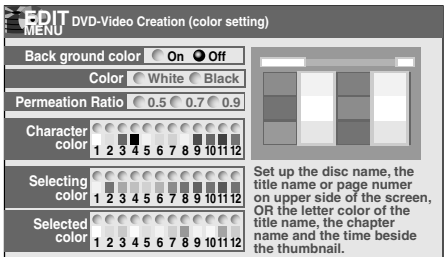
■ Selecting colour options on menus

Several options are available: a translucent background for better legibility, character colour and cursor colour selections.

1) At step 11 (⇨ page 102), go to the next page and select a captured image by ▲/▼/◄/►, then press MODE.
The preview screen appears.

2) Press MODE.
A colour setting display appears.

e.g.


EDIT
MENU
DVD-Video Creation (color setting)
Back ground color On Off
Color White Black
Permeation Ratio 0.5 0.7 0.9
Character color 1 2 3 4 5 6 7 8 9 10 11 12
Selecting color 1 2 3 4 5 6 7 8 9 10 11 12
Selected color 1 2 3 4 5 6 7 8 9 10 11 12
Set up the disc name, the title name or page numer on upper side of the screen, OR the letter color of the title name, the chapter name and the time beside the thumbnail.

3) Set each item by ▲/▼/◄/►, referring to the guidance on the right half of the display, finally press RETURN to exit.
The preview screen returns.

■ If a message appears while selecting a part

You may receive a message, such as "Selection of Writing Test in the next option setting is recommended to check whether Aspect Ratio coexists". If a copy-prohibited content is included, or if the aspect ratio is changed meanwhile, cancel the selection. If you are not sure, select "Writing Test" ("Parts Test" or "All Test").

Note

- Depending on selection or condition of items, copying may result in failure. If a message appears, be sure to, prior to step 8, press the QUICK MENU button. Then press the ▲/▼ buttons to select "Cancel selected title", and press the ENTER button. If you do not do this and continue the copying process, an error may occur and the disc will be rendered useless.

● Playing a created DVD-Video

You can play the DVD-R/RW (Video mode) in the same manner as you would play a DVD video disc.
See ⇨ page 56.

■ If you want to correct the contents of a DVD-RW (Video mode) after the DVD-Video creation procedure

Cancel the finalization of the DVD-RW (Video mode) (⇨ page 93).
It is possible only on DVD-RW (Video mode) recorded on this recorder.
After cancelling, you can delete titles. However, you cannot re-use the whole disc, since only the last title can restore the disc space.

■ If you want to delete all contents of a DVD-RW (Video mode) after the DVD-Video creation procedure

Load the DVD-RW into the recorder and initialize it, then execute the procedure of DVD-Video creation (⇨ page 98).

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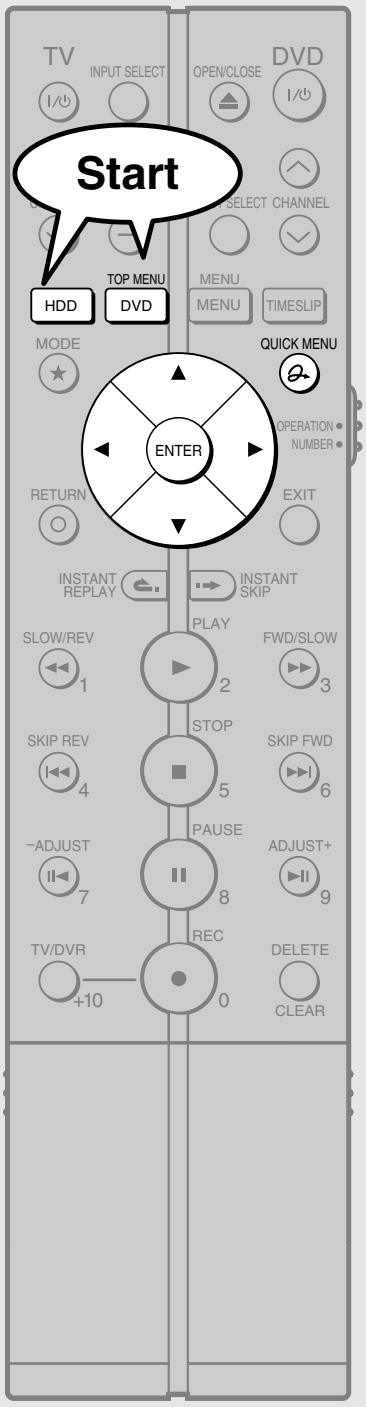
Other editing functions

Changing the picture on CONTENT MENU

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

You can register your favorite scene as a thumbnail displayed on the "CONTENT MENU".
On a finalized DVD-R/RW disc, this feature is not available.

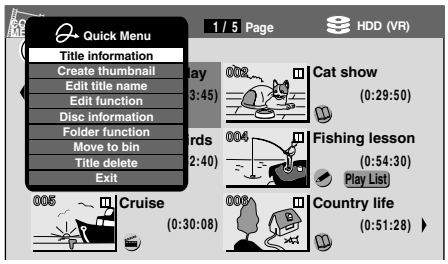


1 **Press HDD or DVD, then press ▲ / ▼ / ◄ / ► to select a title.**

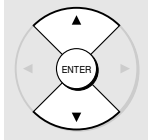
2 **Press QUICK MENU.**

The Quick Menu appears.

e.g.

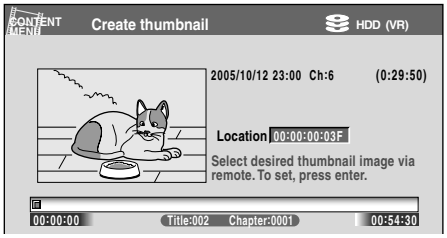


3 **Press ▲ / ▼ to select "Create thumbnail" (or "Create CHP thumbnail" if selected a chapter at step 1), then press ENTER.**



The "CONTENT MENU Create thumbnail" display appears.

e.g.



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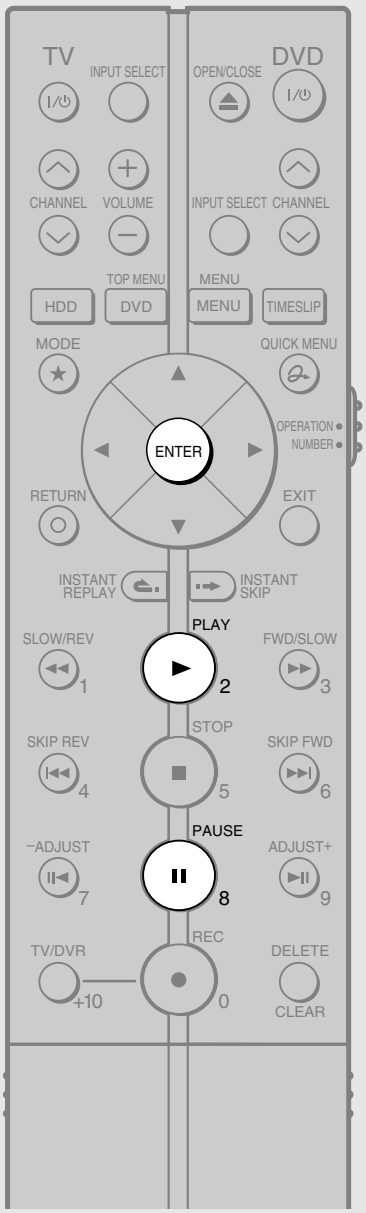
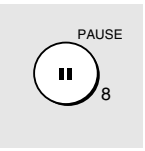


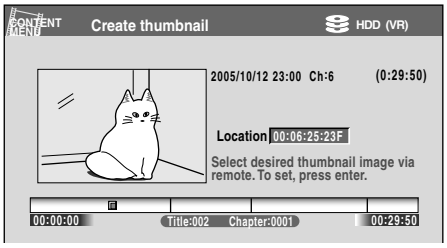
4 Press PLAY to start playback.

Locate a scene you want to capture as a thumbnail.
You can use the following buttons.
SLOW/REV, FWD/SLOW, SKIP REV, SKIP FWD, PAUSE, ADJUST, etc.

5 At the point where you want to capture a thumbnail image, press PAUSE.



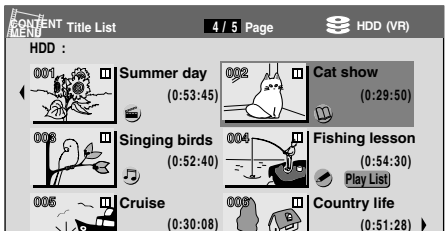
e.g.



6 Press ENTER.

The “CONTENT MENU” returns. The selected scene is displayed as a thumbnail.

e.g.



Notes

- There may be a small difference between a thumbnail made on the “Create thumbnail” display and that displayed in the “CONTENT MENU”. Operation with the SLOW/REV or FWD/SLOW buttons may extend the difference.
- You cannot create thumbnails of chapters in a title that contains a still picture.
- If you create a chapter thumbnail, and then record or edit the disc on other devices, the chapter thumbnail may return to the top of the chapter.

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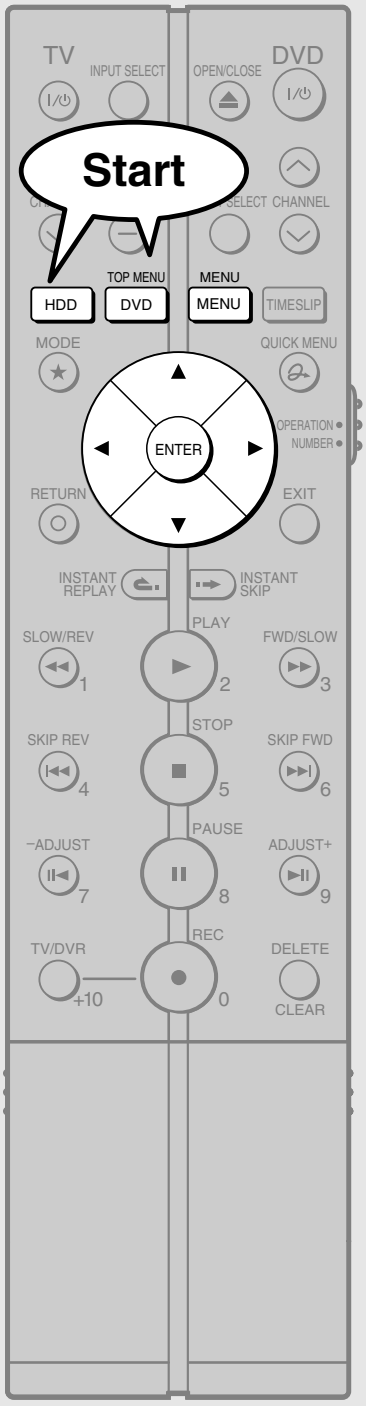
Other editing functions (Continued)

Combining two titles (Original) into one

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video) DVD-VIDEO VCD CD

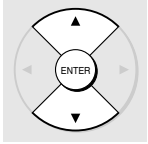
Use this feature to combine two titles into one. The second title is deleted as the second title is added to the end of the first title.



1 **Press HDD or DVD to select a disc that contains titles or chapters you want to merge.**

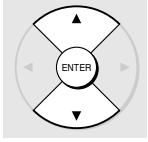
2 **During playback or stop, press MENU.**

3 **Press ▲/▼ to select "Edit programme", then press ENTER.**



The "EDIT MENU Main Menu" appears.

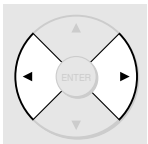
4 **Press ▲/▼ to select "Combine titles", then press ENTER.**



The "EDIT MENU Combine ORG Title" display appears.

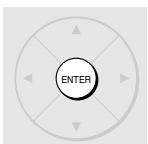
e.g.

5 **Press ◄/► to select the first title to merge.**

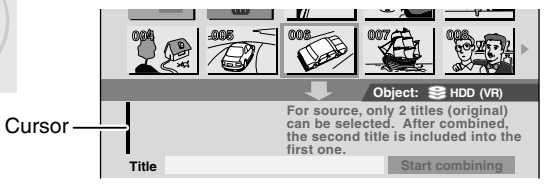


Press SKIP REV (I◄◄) or SKIP FWD (►►I) button to move to the previous or next page.

6 **Press ENTER.**



The cursor appears in the lower area of the screen (the title to merge to).


Cursor
Object: HDD (VR)
For source, only 2 titles (original) can be selected. After combined, the second title is included into the first one.
Title
Start combining

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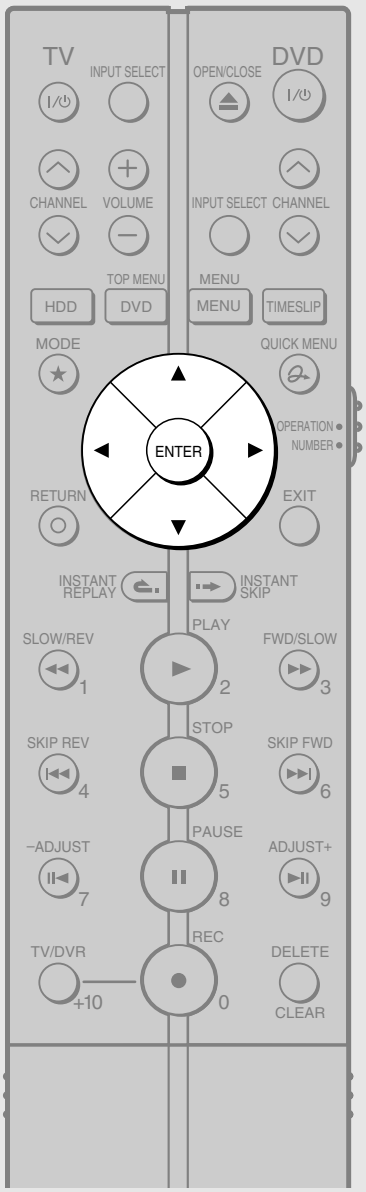
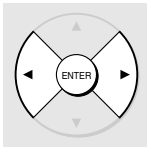


7 Press ◄/► to select the location to put the part and press ENTER.



It is fixed at the left side at the beginning. Press ENTER button. The selected part moved into the location of the cursor.

e.g.

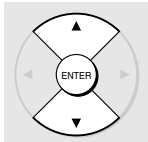
8 Perform steps 5 to 7 and select the second title.

You cannot select the same title.

To cancel the registered part:

1) Select the part that you want to cancel, and press QUICK MENU button to display the Quick Menu.
2) Press ▲/▼ buttons to select “Cancel Selected Title” (or “Clear All Selected Items” for cancelling the selection of multiple items at a time).
3) Press ENTER button.

9 Press ▲/▼ to select “Start combining” and press ENTER, then select “Yes” and press ENTER.



The combining process starts.

Notes

- You cannot stop the combining process after it has started.
- You cannot combine titles if their length will exceed 8 hours.
- You cannot combine a protected title or a title containing still pictures.
- The title name of the first title is given to the title after combining.
- The second title is combined into the first title, maintaining the chapter divisions and chapter names.
- Titles and chapters show their names for about 2 seconds at the bottom of the screen when they are selected.
- If you combine titles in folders, the new title will be created in the first folder.

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■ Discs and editing functions

Available editing functions may differ depending on the disc,

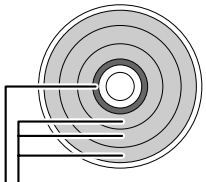
	HDD	DVD-RAM	DVD-RW[*4]		DVD-R[*4]	
			VR mode	Video mode	VR mode[*3]	Video mode
Dividing into chapter	Yes[*1]	Yes[*1]	Yes[*1]	Yes[*2]	Yes	Yes[*2]
Deleting titles or chapter	Yes[*1]	Yes[*1]	Yes[*1]	No	Yes	No
Merging chapters	Yes[*1]	Yes[*1]	Yes[*1]	No	Yes	No
Combining tltles (Original)	Yes[*1]	Yes[*1]	Yes[*1]	No	Yes	No
Editing a Playlist	Yes[*1]	Yes[*1]	Yes[*1]	No	Yes	No

[*1] Most suitable.
[*2] You can create chapters in DVD-R/RW (Video mode) only while recording.
[*3] There is a limit in the number of times DVD-R (VR mode) can be edited.
[*4] Unfinalized DVD-R/RW only. (Finalized DVD-R/RW cannot be edited.)

■ On editing of DVD-R (VR mode)

You can create chapters and make a Playlist using recorded contents in DVD-R (VR mode), as well as DVD-RAM or DVD-RW (VR mode). However, DVD-R (VR mode), different from DVD-RAM or DVD-RW (VR mode), has a limit in the number of times it can be edited, depending on the remaining disc space or the number of times of loading.
Additionally, DVD-R (VR mode) cannot restore the disc space even after recorded content is deleted.

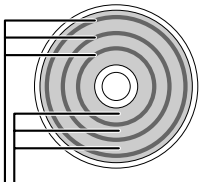
DVD-RAM, DVD-RW



Area for recorded titles

Area where editing information (dividing chapter, making Playlist, deleting, etc.) are saved
Each time it is edited, the recorder writes over the old one to save.

DVD-R



Area for recorded titles

Area where editing information (dividing chapter, making Playlist, deleting, etc.) are saved
Each time it is edited, the recorder writes the information here adding to the old one.

■ Number of times of DVD-R (VR mode) editing

The number of times of DVD-R (VR mode) depends on the remaining disc space. If the disc has little space, a message appears when it is loaded, and tells you that there are only a few times of editing left.
The number is consumed each time of creating chapters or flashing of “Loading” icon.
Disc finalizing is available even on a disc can no longer be edited.
Finalizing of DVD-R, different from on DVD-RW, cannot be cancelled once executed even if there is remaining space in the disc,

■ **Editing/dubbing of copy-once content**

Some programmes may contain copy control signals to restrict recording only once for the purpose of protecting the copyright owners. (Copy-once content) To record these programmes on this recorder, comply with the following restrictions.

■ **Copy-once content, recorded on the HDD cannot be copied to DVD-R/RW (Video mode).**

DVD-R/RW (Video mode) format cannot record copy-once content. To save these contents, load a CPRM compatible DVD-RAM or DVD-R/RW (VR mode) and move them to it.

■ **Copy-once content, recorded on a DVD disc cannot be moved to the HDD.**

Once recorded, copy-once content cannot be copied again. The only option left is moving from the HDD to a DVD-RAM or DVD-R/RW. Moving from a DVD disc to the HDD is not permitted.

■ **Copy-once content, recorded on a DVD disc cannot be played on a PC.**

Once recorded, copy-once content cannot be copied again. DVD standard saves the data by the copy protection system, called CPRM. A PC is required to be equipped with CPRM compatible playback software program and CPRM compatible disc drive to play a DVD disc which contains copy-once content.

■ **Copy-once content takes more time to display thumbnails on CONTENT MENU or EDIT MENU.**

Once recorded, copy-once content cannot be copied again. The recorder does not store thumbnails of copy-once content, different from normal content. Therefore, each time a menu is opened the recorder searches thumbnails among recorded titles. This is the reason why it takes more time to display thumbnails of copy-once content.

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Function Setup

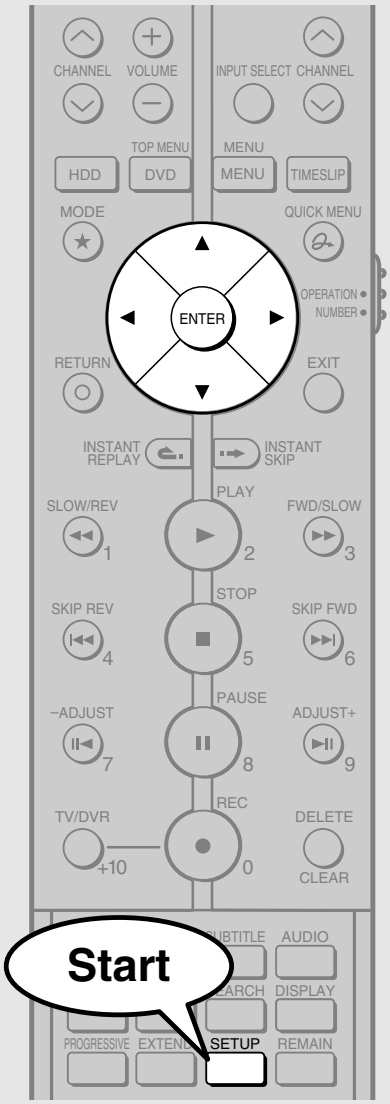
You can change the default settings to customize performance to your preference.

- **Customizing the function settings**

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video) | DVD-VIDEO | VCD | CD

Customizing the function settings

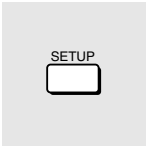
You can change the default settings to customize performance to your preference.



Notes

- The SETUP button can function even during normal playback. However some items may be grayed out and they cannot be selected. In this case, try again after playback is stopped.
- The SETUP button does not function during recording, Recorded Title Play, Chase Play or Pause TV modes.

1 Press SETUP in the lid.

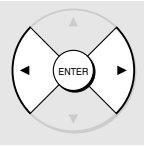


The following setup display appears.

e.g.

It can be displayed by selecting “Other settings” on the Menu.

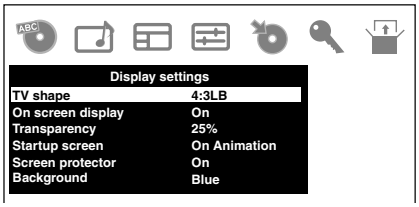
2 Press ◄/► to select the icon of a group that contains a desired item, then press ENTER.



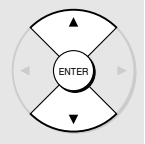
For details on each setting, see the next page.

e.g. When “Display settings” is selected:

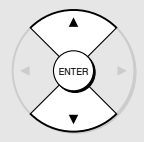
e.g.



3 Press ▲/▼ to select a desired item, then press ENTER.

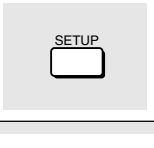


4 Refer to the explanations on pages beginning from 115, to change the selection by ▲/▼ or other buttons, then press ENTER.



- To select another item in the same group, repeat steps 3 to 4.
- To shift to another group, press the RETURN button then repeat steps 2 to 4.

5 Press SETUP.



The setup display disappears and the setting is completed.

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DVD player settings

DVD disc menu language

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Selects a preferred language for disc menus.

English:
To display disc menus in English.

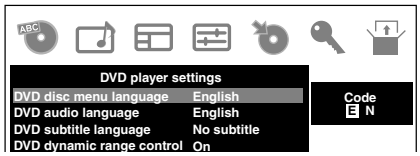
French:
To display disc menus in French.

German:
To display disc menus in German.

Spanish:
To display disc menus in Spanish.

Others:
To make a further language choice.
After pressing the ENTER button, follow steps 1) – 4) below.

e.g.



1) **Obtain the language code of the preferred language from the Language code list (⇨ page 135).**
2) **Select the first character by pressing the ▲/▼ buttons (or the ADJUST button).**
3) **Press the ◄/► buttons to shift. Select the second character by pressing the ▲/▼ buttons (or the ADJUST button).**
4) **Press the ENTER button.**

Note
- Some DVD video discs may not include your preset language. In this case, the recorder automatically displays disc menus consistent with the disc's initial language setting.

DVD audio language

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Selects a preferred language for the sound track.

English:
To play sound tracks recorded in English.

French:
To play sound tracks recorded in French.

German:
To play sound tracks recorded in German.

Spanish:
To play sound tracks recorded in Spanish.

Others:
To make further choices.
After pressing the ENTER button, follow steps 1) - 4) below.

e.g.

1) **Obtain the language code of the preferred language from the Language code list (⇨ page 135).**
2) **Select the first character by pressing the ▲/▼ buttons (or the ADJUST button).**
3) **Press the ◄/► buttons to shift. Select the second character by pressing the ▲/▼ buttons (or the ADJUST button).**
4) **Press the ENTER button.**

Note
- Some DVD video discs may be played in a different language from that you selected. A prior language may be programmed by the disc.

DVD subtitle language

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Selects a preferred language for subtitles.

English:
To display subtitles in English.

French:
To display subtitles in French.

German:
To display subtitles in German.

Spanish:
To display subtitles in Spanish.

(Continued)

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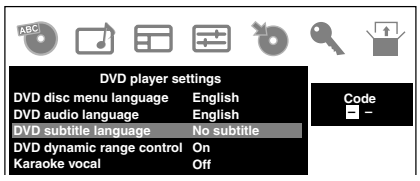
No subtitle:
To disable subtitles.

Others:
To make a further choice.
After pressing the ENTER button, follow steps 1) – 4) below.

e.g.



1) **Obtain the language code of the preferred language from the Language code list (⇨ page 135).**
2) **Select the first character by pressing the ▲/▼ buttons (or the ADJUST button).**
3) **Press the ◄/► buttons to shift. Select the proceeding character by pressing the ▲/▼ buttons (or the ADJUST button).**
4) **Press the ENTER button.**

Notes
- Some DVD video discs may be set to display subtitles in a different language from that you selected. A prior subtitle language may be programmed by the disc.
- Some DVD video discs allow you to change subtitle selections only via the disc menu. In this case, press the DVD button and choose the appropriate subtitle language from the selection on the disc menu.

DVD dynamic range control

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns on or off a function that makes faint sounds easier to hear even if you lower the volume during late-hour playback.

Off:
The DVD dynamic range control does not function.

On:
The DVD dynamic range control functions.

Notes
- This function is available only for a disc recorded in Dolby Digital format.
- Depending on the disc you play back, the actual effect of this function differs.

Karaoke vocal

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns on or off the vocal output during DVD KARAOKE disc playback.

Off:
The main vocal sound is not output.

On:
The main vocal sound is output.

Notes
- This function is available only for a DVD KARAOKE disc recorded in Dolby Digital Multi Channel format.
- If you want to enjoy the KARAOKE function, connect an amplifier or other such device to this recorder.

DVD parental lock

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns the parental lock function on or off.
DVD video discs equipped with the Parental Lock function have a predetermined limitation level. The limitation level or limitation method may differ depending on the disc. For example the total disc may not be played back, or an extreme violent scene maybe cut or replaced automatically by another scene.

Important
- Depending on discs, it may not be evident whether the disc is compatible with the Parental Lock function. Make sure that the Parental Lock function you set is activated correctly.

On:
Select this to activate the Parental Lock function or to change the setting.
After pressing the ENTER button, follow steps 1) – 3) below.

Off:
Deactivates the Parental Lock function.
After pressing the ENTER button, follow steps 1) below.

1) **Set the OPERATION/NUMBER switch to "NUMBER", then enter a 4-digit security code by using the number buttons, then press the ENTER button.**

   If you make a mistake entering your security code, press the CLEAR button before pressing the ENTER button, and re-enter the correct security code.

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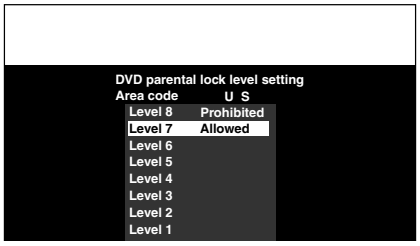
2) Press the ▲/▼/◄/► buttons to move the cursor. Then press the ADJUST button to enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the following list.

Country/Area	Code
AUSTRALIA	AU
BELGIUM	BE
CANADA	CA
CHINA	CN
CHINA HONG KONG	HK
DENMARK	DK
FINLAND	FI
FRANCE	FR
GERMANY	DE
INDONESIA	ID
ITALY	IT
JAPAN	JP
MALAYSIA	MY
NETHERLANDS	NL
NORWAY	NO
PHILIPPINES	PH
RUSSIAN FEDERATION	RU
SINGAPORE	SG
SPAIN	ES
SWEDEN	SE
SWITZERLAND	CH
TAIWAN	TW
THAILAND	TH
UNITED KINGDOM	GB
UNITED STATES	US

3) Select the desired limitation level by pressing the ▲/▼ buttons, and then press the ENTER button.

e.g.



Unless the Parental Lock function is set to "Off", a disc that has a higher limitation level than your selected limitation level cannot be played back. For example, if you select level 7, discs exceeding level 8 are locked and cannot be played back.

When "US" is selected, its limitation level corresponds to the following settings.

Level 7 : NC-17 Level 3 : PG
Level 6 : R Level 1 : G
Level 4 : PG13

■ To change the limitation level of the Parental Lock function

Follow step 1) - 3) above.

■ To change the security code

1) Press the STOP button 4 times after selecting "On" and "Off" in order, and then press the ENTER button.

The security code is cleared.

2) Set the OPERATION/NUMBER switch to "NUMBER", then enter a new 4-digit security code by using the number buttons.

3) Press the ENTER button.

DVD title stop

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns on or off a feature that automatically stops playback after a title has been viewed.
This function is unavailable on DVD-R/RW discs (VR mode).

Off:
Plays back all following titles on the disc after the current title has been viewed.

On:
Recorder is stopped after playback of current title being viewed is completed.

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Picture/Audio settings

PAL/Auto

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects the video system of a disc.

PAL:
To play a PAL disc. Connect a PAL TV to view a picture.

Auto:
The recorder automatically identifies PAL or NTSC video system of a disc. Connect a multisystem TV (PAL/NTSC compatible) to view a picture.
A playback picture may be distorted when detected a signal change between PAL and NTSC on the disc.

Note:
Alert message is displayed when detected both PAL and NTSC video system on the same disc.

Custom picture select

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects from between 4 picture settings (Normal, Setting 1-3) you stored in the memory.
During dubbing with “Change quality” set or dubbing to the HDD it will be set to Normal.

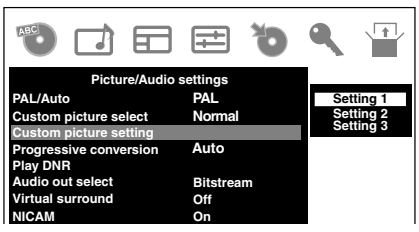
Custom picture setting

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

You can adjust fine picture quality and store up to 3 custom picture settings in the memory of the recorder.

1) Press the ▲ / ▼ button to select a desired setting from 3 settings, and then press the ENTER button.

e.g.



2) Press the ▲ / ▼ buttons to select adjustable items, and then press the ◄ / ► buttons to select each parameter.

Brightness

(0) Darker ⇔ Brighter (14)

Contrast

(–7) Lower ⇔ Higher (7)

Color

(–7) Duller ⇔ Brighter (7)

Edge enhance

Soft (ON) ⇔ Off (normal) ⇔ Sharp (ON)

Gamma Level

off ⇔ 1 ⇔ 2
To adjust Gamma Level when the picture is too dark to view.

3) After adjusting the items, press the ENTER button.

Progressive conversion

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects the system of output signal. (Only when connected to a PROGRESSIVE TV.)
There are two types of source content in pictures recorded in DVD video discs: film content (pictures recorded from films at 24 frames per second) and video content (video signals recorded at 25 frames in PAL (30 frames in NTSC) per second). Make this selection according to the type of content being viewed.

Auto:
Select this position normally.
The recorder automatically detects source content, film or video, of playback source, and converts that signal in the progressive output format in an appropriate method.

Video:
The recorder filters video signal, and converts it in the progressive output format appropriately.
Suitable for playback of video content pictures.

Film:
The recorder converts film content pictures in the progressive output format appropriately.
Suitable for playback of film content pictures.
The progressive output feature will be most effective under this selection.

Note
• Depending on the disc, pictures may be cut off or doubled.

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Play DNR

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects a setting for playback at a reduced noise level. Press the ▲/▼ buttons to select an item then select “On” or “Off” using the ◄/► buttons.

3D-DNR:

Off:
Not activated.

On:
Reduces the noise levels of brightness signals and color signals present in the video signal during playback.

Mosquito NR:

Off:
Not activated.

On:
Reduces mosquito (flicker) noise occurring in the contour sections of images.

Block NR:

Off:
Not activated.

On:
Reduces noise that appears in the form of blocks (block noise) in a portion of the screen during playback of images with rapid movement.

DNR is the abbreviation for Digital Noise Reduction.

Notes
- DNR effects vary depending on the disc.
- Detailed images may no longer be visible depending on the scene due to the effects of DNR.
- Depending on the disc or scene, “On” may produce undesirable picture artifacts or increase noises on contours. In this instance, select “Off.”
- While you are using the zoom feature, “DNR” does not function.

Audio out select

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects an output sound format corresponding to your audio system connection.

For details about output sound selection, see ⇨ page 132.

Bitstream:
Select this when an amplifier equipped with built-in Dolby Digital, DTS, MPEG1 or MPEG2 decoder is connected to this recorder.
When you play back a disc recorded in Dolby Digital, DTS, MPEG1 or MPEG2 format, digital audio signal is output.

PCM:
Select this when a 2ch digital stereo amplifier is connected to this recorder. When you play back a disc recorded in Dolby Digital, MPEG1 or MPEG2 format, the sound is converted to the PCM (2ch) format and output.

Virtual surround

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

This lets you play discs with acoustic effects having greater depth and presence even when using only two speakers.

Off:
Virtual surround effect not activated.

On:
Virtual surround effect activated.

Notes
- This function is only activated when playing back a disc recorded with Dolby Digital.
- This function is only activated when “Audio Out Select” is set to “PCM” if the DIGITAL AUDIO OUT COAXIAL jack of this DVD recorder is connected to an amplifier or similar device.
- When the virtual surround effect is activated, Dolby Progressive Sound may be deactivated or sound differently than usual.
- When the virtual surround effect is activated, the volume may sound differently than usual.
- Set “Virtual surround” to “Off” if the audio sounds distorted.

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NICAM

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects a sound type for NICAM programme.
NICAM programmes are divided into 3 types. NICAM Stereo, NICAM Mono and Mode I/Mode II (transmission in another language). NICAM programmes are always accompanied by a standard mono sound broadcast and you can select the desired sound on the screen (for recording).

Off:
Only set at this position to record the standard mono sound during a NICAM broadcast if the stereo sound is distorted due to inferior reception conditions.

On:
Normally set at this position.

Display settings

TV Shape

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects a picture size according to the aspect ratio of your TV.

For details on this setting, see “TV shape setting” (⇨ page 36, “INSTALLATION GUIDE”).

On screen display

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns on or deactivate the operational status display (e.g., ▶) on the TV screen.

Off:
Deactivates the operational status display (e.g., ▶) on the TV screen.

On:
Activates the operational status display (e.g., ▶) on the TV screen.

Transparency

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Selects the transparency of the GUI and its relationship to the background image.

0% : 25% : 50%

Startup screen

Turns on or off the start-up screen setting that makes the background picture appear automatically when turning on the power.

Off:
The startup screen is not displayed.

On: Animation
The startup screen appears automatically when turning on the power.

On: menu
The Menu screen appears automatically when turning on the power.

Screen protector

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns the screen saver on or off.
To reduce TV screen damage (image burn), this function disengages the pause mode of a playback image. The display returns to the normal TV screen when the recorder remains idle for more than 15 minutes. In time slip mode, the playback pause is released.

If this function is set to “On”, the recorder, if freezes, may return to the normal by leaving it for about 15 minutes or longer.

Off:
Deactivates the screen protector function.

On:
Activates the screen protector function.

Note
- Toshiba does not guarantee that this function protects the TV screen by all means.

Background

Selects a screen colour when receiving no video signals such as selecting a non-broadcasting channel.

Off:
No colour.

Black:
Black is displayed.

Blue:
Blue is displayed.

Important
- Depending on signal reception, the Background setting may be cleared. To prevent this, set this function to “Off”.

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Operational settings

IR code

Switches the codes to operate the recorder. If you use the second and third TOSHIBA HDD/DVD video recorders, set the different remote codes for each recorder to avoid confusion in the response of the recorders.

For details about this setting, refer to “Operating the second and third TOSHIBA HDD/DVD video recorders with the remote control of this recorder” (page 40, “INSTALLATION GUIDE”).

DR 1 : DR 2 : DR 3

Instant skip interval

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Sets how much time is skipped when the INSTANT SKIP button is pressed.

5 sec. : 10 sec. : 30 sec. : 5 min.

Instant replay interval

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Sets how far back is replayed when the INSTANT REPLAY button is pressed.

5 sec. : 10 sec. : 30 sec. : 5 min.

Title thumbnail point

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

For recorded titles, sets how far a scene from the start is set as the title thumbnail.

0 sec. : 3 sec. : 10 sec. : 35 sec. : 1 min. : 5 min.

Note

- Thumbnails can also be changed to other scenes. See page 106.

HDD/RAM title play

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Activates resume play per title or continuous play.

Title resume:

Remembers the point where you stop playback. Allows you to resume the playback from that point.

Serial playback:

You can play back titles (Original, Playlist) stored in the HDD or a DVD-RAM continuously. Because there is no division between titles, the recorder remembers only the last point where you stopped playback.

Still group interval

HDD DVD-RAM DVD-RW (VR) DVD-RW (Video) DVD-R (VR) DVD-R (Video)
DVD-VIDEO VCD CD

Sets an interval for display of still pictures (in seconds) when playing back a collection of still images.

1 sec. : 2 sec. : 3 sec. : 5 sec. : 10 sec. : Default

Priority contents

Selects the playback priority between JPEG (picture) files and MP3 (audio) files.

Photo: JPEG files take priority over MP3 files.
Audio: MP3 files take priority over JPEG files.

Notes

- If this selection does not correspond to disc contents, the recorder will take a longer time to start playback of the disc.
- To change this setting to a loaded disc, open the disc tray after the setting, then close the disc tray to have the recorder read the disc again.

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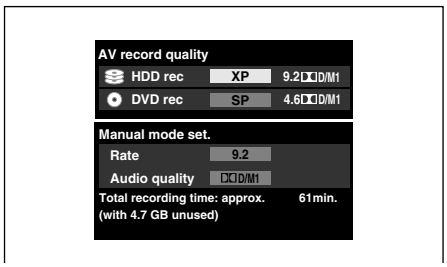
DVD recorder operation

AV record quality

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

You can select from 4 combined picture and sound quality recording settings prior to actual recording. Actual selection applied becomes the default setting for the normal recording or programmed recording.

e.g.



Sound and picture quality for the three recording settings of XP, SP and LP cannot be altered. You can freely change the settings by using “Manual mode set”.
Set in advance frequently used recording settings for DVD or HDD.

AV record quality

1) Press the ▲/▼ buttons to select the media to record.
2) Press the ◄/► buttons to select the recording settings.

Manual mode set.

1) Press the ▲/▼ buttons to select the desired item, “Rate” or “Audio quality”.
2) Press the ◄/► buttons to change the setting.

   You can adjust “Rate” by 0.2 Mbps from 1.0 to 9.2. (You cannot set the rate from 1.0 to 1.4 and 1.4 to 2.0.)

   • If you set the rate of the “Rate” setting to 9.2, XP may be displayed in spite of the Audio quality setting.
3) Press the ENTER button.

Note

• Depending on the sound quality settings, the upper limit for the picture quality setting differs.

Picture record mode

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Adjusts problems with the brightness of video signals of TV broadcasts or other external input.

Press the ▲/▼ buttons to select the source, and the ◄/► buttons to select the mode.

(Only use this setting when you cannot adjust the brightness satisfactorily with the “Custom picture setting” in the “Picture/Audio settings” (Page 118) of this recorder.)

Important:

• This setting changes the video signal to record and the recorded signal is not returned to the original state even when this setting is changed after recording. When duplicating from VHS tape, if you can check the video recording state beforehand, we recommend first playing back for a while and checking the overall brightness tendency, then setting an appropriate mode.

Standard:

The brightness of signals received with this recorder and external input signals is adjusted automatically. Use this mode normally.

Mode 1:

This setting is used to record the signals darker when the screen is too bright.

Mode 2, 3, 4:

As the number rises, the signals are recorded brighter. Use these modes to adjust the brightness.

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DVD-RW rec. mode setting

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Sets recording mode when formatting DVD-RW.

Video mode:
The disc will be formatted in Video mode.

VR mode:
The disc will be formatted in VR mode.

Video mode rec. setting

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

See page 28.

Relief recording

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

If you set a timer programme to a loaded DVD disc but the disc does not have remaining space to record the programme, the recorder records the whole programme to the HDD instead of the loaded disc.

Off:
Deactivates this function.

On:
Activates this function.

Notes
- This feature does not work while dubbing using the mode “Change quality”.
- This function does not work when the remaining disc space of the HDD is less than of a loaded disc.

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Management settings

Security folder setting

Sets the security folder to turn on/off.
See page 55.

Genre setting

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

This registers a frequently used genre name onto the menu. Genre names registered here are displayed in the "Genre" on the Quick Menu.

1) Press the ▲/▼ buttons to select a position in the "Current genre list" you want to change, then press the ENTER button.

A list of genres appears.

2) Press the ▲/▼ buttons to select a genre, then press the ENTER button.

A list of genre names appears.

You can turn the pages using the ► button.

3) Press the ▲/▼ buttons to select a genre name, then press the ENTER button.

The selected genre name replaces the previous one of the position you selected at step 1).

4) Repeat steps 1) to 3) to register genre names.

5) When genre names are registered, press the RETURN button to return to the "Management settings" menu.

Power saving setting

This sets the power saving mode of this recorder.

HDD auto stop

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Turns on or off a power saving function that stops the HDD after a certain period of inactivity.

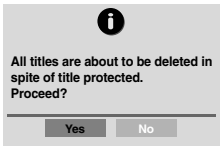
Off:
Turns off an HDD auto stop mode.

On:
Turns HDD drive off after recorder is idle for approximately 5 minutes.
When the PLAY or REC button is pressed for the HDD while the HDD drive is turned off, it takes a little longer time to play or record.

All HDD titles delete

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

This deletes all the titles on the HDD.



1) Press the ◄/► buttons to select "Yes", then press the ENTER button.

2) Confirm the message, press the ◄/► buttons to select "Yes" and then press the ENTER button.

Deletion of all titles starts.

If you want to cancel the deleting, select "No".

Note
- If you periodically execute All HDD titles delete, this holds down fragmentation (increased complexity) of the disc and maintains good operability.
- All titles in "LOCK" will be deleted.

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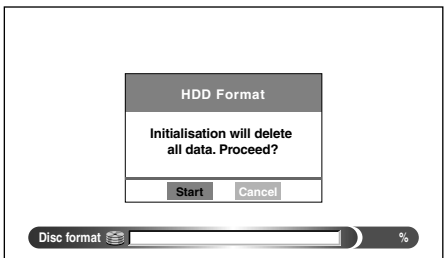
HDD Format

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Initializes the HDD.
Normally it is not required to initialize the HDD. However when the HDD does not function correctly, initializing the HDD may solve the situation. If you initialize the HDD, all titles stored in the HDD are permanently deleted.

e.g.



1) **Press the ◄/► buttons to select "Start", then press the ENTER button.**

2) **Confirm the message, press the ◄/► buttons to select "Start", and then press the ENTER button.**

   Initialization of the HDD starts.

   If you want to cancel the initializing, select "Cancel".

DVD-RAM physical format

HDD | DVD-RAM | DVD-RW (VR) | DVD-RW (Video) | DVD-R (VR) | DVD-R (Video)
DVD-VIDEO | VCD | CD

Performs physical formatting of a DVD-RAM disc.
See ⇨ page 27.

Initial settings **See ⇨ page 24, "INSTALLATION GUIDE".**

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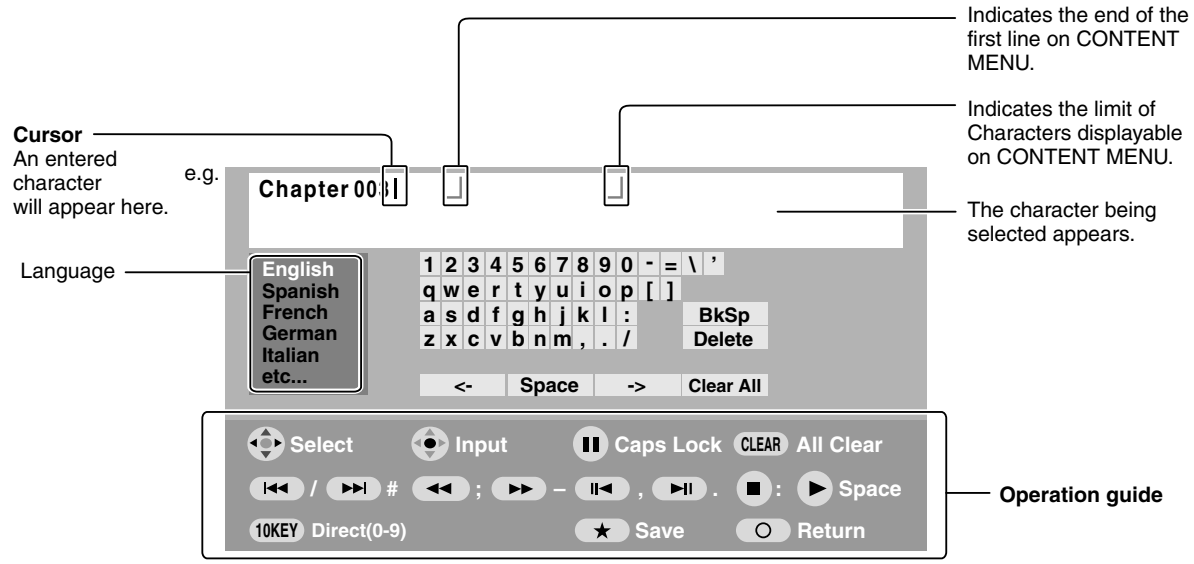
Others

- Entering characters
- Before calling service personnel
- Output sound conversion table
- Error codes on the display window
- Recording duration
- Language code list
- Specification

Entering characters



■ Operation guidance of the remote control

To enter the character, normally use the direction ▲/▼/◄/► buttons on the remote. About the other buttons to be used are shown on the operation guide.

- Shifts the cursor.
- Enters your selection.
- *Caps Lock
- CLEAR Erases one character immediately to the left side of the character.
  **Erases all of the characters.
- *Enters a space.
- *Enters a symbol.
- ★ Saves the changes and returns to the previous screen.
- ○ Cancels the changes and returns to the previous screen.

* Enters a digit when the OPERATION/NUMBER switch is set to “NUMBER”.
** Work only when the OPERATION/NUMBER switch is set to “NUMBER”.

■ Switching a language

Before entering a character, move a cursor to the language selection area by pressing the ◄/► buttons. Then press the ▲/▼ buttons to select a language, then press the ENTER button.

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■ Entering characters

The cursor may be followed by unwanted characters. You can erase them if necessary by either of the following measures:

Erasing characters

- Erasing all the characters on the writing board
  Select “Clear All” by pressing the ▲ / ▼ / ◄ / ► buttons, then press the ENTER button.
  Alternatively, press the CLEAR button.

- Erasing one character before the cursor
  Select “BkSp” by pressing the ▲ / ▼ / ◄ / ► buttons, then press the ENTER button.
  Alternatively, press the DELETE button.

(1) Press the II button to select an input mode.
(2) Press the ▲ / ▼ / ◄ / ► buttons to select a character, then press the ENTER button.
    The selected character is input on the cursor.
(3) Repeat steps (1) and (2) to enter characters.
(4) When finished, press the MODE button to save the characters.
    The characters you entered appears.

Notes

- You can enter up to 64 characters.
- When unnecessary information appears, or when you want to alter the input character, press the CLEAR button to erase all, or press the DELETE button to erase an unnecessary character.

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Before calling service personnel

If you experience any of the following difficulties while using this unit, check the list below before consulting your nearest Toshiba dealer.

Power

■ The power is not turned on.

- The power cord is not connected securely.
  → Connect the power cord securely.

Connection to your TV

■ There is no TV picture.

- The video cable to this recorder and your TV is not connected securely.
  → Connect the video cable to this recorder and your TV securely.
- The input select on your TV is not set property.
  → Select the input to which this recorder is connected.

TV reception

■ There is no picture.

- The aerial cable is not connected securely.
  → Reconnect the aerial cable securely.

■ There is poor reception.

- Channel settings are not completed.
  → Set the channel settings.
- The aerial cable is not connected securely.
  → Reconnect the antenna cable securely.
- Aerial signal is poor.
  → Consult your dealer for adjustment.

Playback

■ A DVD or CD does not play.

- The format of the recorded data does not correspond to this recorder, or the region number is neither “2” nor “ALL”.
  → Check the disc.
- A defective or dirty disc is inside.
  → Change the disc.
- The HDD mode is selected.
  → Press the DVD button.

■ The HDD does not play.

- The DVD mode is selected.
  → Press the HDD button.

■ During playback, picture noise appears.

- Picture noise may appear in the following cases. It is not a malfunction.
  → There is picture noise in the original recording.
  → Weather, reception conditions may cause noise.
  → The data transmission rate is set to low.
  → The image data processing of this recorder cannot follow dynamic movement on the screen. (Low video data rate)
  → A physical error has occurred on the DVD disc.

  If an error occurs during reading data of a disc, block-noises may be produced there. Repeated reading of this location where the error occurred (retry) can decrease the generation of block noise. However, it can also raise the possibility of unintended delays or stops of playback. In order to prevent them, the recorder limits the number of times of retry.

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Recording

■ Cannot be recorded on a DVD-RAM disc.

- The disc is protected from deleting data.
  → Set the write-protect tab to the opposite of "PROTECT" (⇨ page 7).
- The disc is protected by a PC or the recorder.
  → Disable the protection on the device which protected the disc.
- The disc space is not sufficient.
  → Delete unwanted data (⇨ page 42) or prepare a new disc.
- The disc is not initialized.
  → Initialize the disc (⇨ page 26).
- The disc may contain errors.
  → Complete the physical format on the disc (⇨ page 27).
- The physical format on the disc is not completed.
  → Complete the physical format on the disc (⇨ page 27).
- The disc has been recorded in the NTSC system. You can replay a title that has been recorded in the NTSC system, but you cannot display it in the thumbnail or use the edit or dubbing functions.
  → You can use the recorder to initialize the disc to use it with this recorder, but the contents will be lost. If you do not want to initialize the disc, you can still play it, but no other functions are available.

■ Cannot be recorded on the HDD.

- The DVD mode is selected.
  → Press the HDD button.
- The disc space of the HDD is not sufficient.
  → Delete unwanted data (⇨ page 42) or move the contents to DVD-RAM discs (⇨ page 87).
- Some causes such as power failure may set the recorder to reject the operation to protect the HDD.
  → Copy necessary contents recorded in the HDD to a DVD-RAM disc, and initialize the HDD.

■ Cannot be recorded on a DVD-R/RW (VR mode) disc.

- The disc is protected by a PC or other DVD players.
  → Disable the protection on the device which protected the disc (DVD-RW).
- The disc space is not sufficient.
  → Delete unwanted data (DVD-RW) (⇨ page 42) or prepare a new disc.
- The disc is not initialized (DVD-RW).
  → Initialize the disc (⇨ page 26).

Program

■ Timer programming cannot be completed.

- Clock setting has not been completed.
  → Complete the clock setting (⇨ page 28, "INSTALLATION GUIDE").
- The programs list is full.
  → Cancel unwanted programs (⇨ page 32).

Remote control

■ The remote control does not work.

- The batteries in the remote control are exhausted.
  → Replace all the batteries in the remote control (⇨ page 12, "INSTALLATION GUIDE").
- The light emitter of the remote control is not pointed at the receptor of this recorder.
  → Point the emitter of the remote control at the receptor of this recorder.
- The receptor of this recorder is located too far away from the remote control.
  → Operate the remote control within 7 meters (23 ft) from the receptor of this recorder.
- There are obstacles between the remote control and this recorder.
  → Remove any obstacles.
- The receptor is disturbed by sunlight or fluorescent light.
  → Change the place of this recorder or shield the light.
- The remote control mode is not appropriate.
  → Adjust the remote control mode of the remote control and this recorder (⇨ page 40, "INSTALLATION GUIDE").
- The OPERATION/NUMBER switch is not set appropriate.
  → Set the OPERATION/NUMBER switch to the appropriate side (⇨ page 23, "INSTALLATION GUIDE").

Clock

■ The clock blinks.

→ Complete the initial setting again (⇨ page 24, "INSTALLATION GUIDE").

■ The clock does not keep time.

→ Set the time and date manually (⇨ page 28, "INSTALLATION GUIDE").

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Output sound conversion table

Disc	Sound format		Audio setting (⇨ page 119) and output in the default setting display			
			Bitstream		PCM	
			DIGITAL AUDIO OUT jack	AV OUT AUDIO jacks	DIGITAL AUDIO OUT jack	AV OUT AUDIO jacks
DVD-video disc*	Dolby Digital		Bitstream	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
	Linear PCM	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
		48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
		48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit
		96 kHz/16 bit	48 kHz/16 bit	96 kHz/16 bit	48 kHz/16 bit	96 kHz/16 bit
		96 kHz/20 bit	48 kHz/16 bit	96 kHz/20 bit	48 kHz/16 bit	96 kHz/20 bit
		96 kHz/24 bit	48 kHz/16 bit	96 kHz/24 bit	48 kHz/16 bit	96 kHz/24 bit
	DTS		Bitstream	—	—	—
	MPEG2		Bitstream	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
VIDEO CD	MPEG1		44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit
Audio CD	Linear PCM 44.1 kHz/16 bit		44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit
	DTS		Bitstream	(Noise)	Bitstream	(Noise)
HDD	Dolby Digital		Bitstream	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
	Linear PCM 48 kHz/16 bit		48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
DVD-RAM/R/RW	Dolby Digital		Bitstream	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
	Linear PCM 48 kHz/16 bit		48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
	MPEG2		Bitstream	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
CD-R/RW	MP3		44.1 kHz or 32 kHz or 48 kHz / 16 bit			

***** “DVD video disc” above does not include DVD-R/RW discs recorded on this recorder.

• Do not select a connection or setting indicated as “Noise” in the above list.

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“DTS” and “DTS Digital Out” are trademarks of Digital Theater Systems, Inc.

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Error codes on the display window

The recorder display shows error codes in addition to the message screen.
Main examples are as follows.
The "" in the "ERR **" message indicates an error code. To delete this display, press the DISPLAY button on the remote control.**

Error code	Description	
ERR01	Error detected in the physical format.	
ERR10	Exceeded volume detected.	• When creating a DVD-Video
ERR11	Exceeded number of titles detected.	
ERR12	Exceeded number of chapters detected.	
ERR13	Copy protection information detected.	
ERR14	DVD disc access error detected.	
ERR15	Other errors detected.	
ERR16	HDD access error detected.	
ERR17	Wide image recorded at 1.4 Mbps detected.	
ERR18	Different aspects detected in the same part.	
ERR19	Different resolutions detected in the same part.	
ERR1A	Different sound quality modes detected in the same part.	
ERR1B	Invalid control information detected.	
ERR1C	Parts created in other recorder.	
ERR1D	Parts created with "DVD compatible mode = Off" detected.	
ERR1E	Invalid parts detected.	
ERR1F	Unexpected error detected.	
ERR2E	Menu encode error detected.	• When creating a DVD-Video • When recording on DVD-R/RW • When dubbing to DVD-R/RW
ERR2F	Overflow of the menu size detected.	
ERR30	Exceeded maximum number of menus detected.	
ERR31	Recovery writing executed from compatibiliy of drive and disc.	
ERR32	Incompatibility of disc format detected.	• When recording on DVD-R/RW
ERR33	Disc protected.	
ERR34	Disc protected or system control data error detected.	
ERR35	Exceeded volume in disc budget calculation detected.	
ERR36	Recording failed. (Title not saved.)	
ERR31	Recording failed. (Title saved.)	
ERR38	Writing failed. (Title not reserved)	
ERR39	Writing failed. (Title saved.)	
ERR3A	Unexpected error detected.	
E7000	Possible error detected in the HDD.	

Note
• If you find an error code other than listed above, consult your nearest TOSHIBA dealer.

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Recording duration

Sound rate / Picture quality rate	DD D/M1(192kbps)				DD D/M2(384kbps)				L-PCM				Remarks
	HDD		DVD-RAM		HDD		DVD-RAM		HDD		DVD-RAM		
	Hour	Minute	Hour	Minute	Hour	Minute	Hour	Minute	Hour	Minute	Hour	Minute	
1.0	284	14	08	06	246	11	07	01	136	30	03	52	
1.4	214	59	06	07	192	29	05	28	118	12	03	21	
2.0	154	00	04	22	142	06	04	02	97	04	02	44	Picture quality rate for LP with DD D/M2.
2.2	141	39	04	01	131	30	03	44	92	00	02	36	Picture quality rate for LP with DD D/M1.
2.4	131	07	03	43	122	23	03	28	87	26	02	28	
2.6	122	03	03	27	114	27	03	14	83	19	02	21	
2.8	114	09	03	14	107	28	03	02	79	33	02	14	
3.0	107	13	03	02	101	18	02	52	76	07	02	08	
3.2	101	04	02	51	95	48	02	42	72	58	02	03	
3.4	95	35	02	42	90	52	02	34	70	04	01	58	
3.6	90	41	02	33	86	25	02	26	67	23	01	53	
3.8	86	15	02	26	82	23	02	19	64	55	01	49	
4.0	82	13	02	19	78	42	02	13	62	36	01	45	
4.2	78	34	02	13	75	20	02	07	60	27	01	41	
4.4	75	13	02	07	72	15	02	02	58	27	01	38	Picture quality rate for SP with DD D/M2.
4.6	72	08	02	02	69	24	01	57	56	35	01	35	Picture quality rate for SP with DD D/M1.
4.8	69	18	01	57	66	47	01	52	54	49	01	32	
5.0	66	41	01	52	64	20	01	48	53	10	01	29	
5.2	64	15	01	48	62	05	01	44	51	36	01	26	
5.4	61	59	01	44	59	58	01	41	50	08	01	24	
5.6	59	53	01	40	58	00	01	37	48	45	01	21	
5.8	57	55	01	37	56	09	01	34	47	26	01	19	
6.0	56	04	01	34	54	25	01	31	46	12	01	17	
6.2	54	21	01	31	52	47	01	28	45	01	01	15	
6.4	52	43	01	28	51	15	01	26	43	54	01	13	
6.6	51	11	01	26	49	48	01	23	42	50	01	11	
6.8	49	45	01	23	48	26	01	21	41	49	01	09	
7.0	48	23	01	21	47	08	01	19	40	51	01	08	
7.2	47	05	01	18	45	54	01	16	39	55	01	06	
7.4	45	52	01	16	44	45	01	14	39	02	01	05	
7.6	44	42	01	14	43	38	01	13	38	11	01	03	
7.8	43	35	01	12	42	35	01	11	37	23	01	02	
8.0	42	32	01	11	41	34	01	09	36	36	01	00	Manual maximum setting for L-PCM.
8.2	41	32	01	09	40	37	01	07					
8.4	40	35	01	07	39	42	01	06					
8.6	39	40	01	06	38	50	01	04					
8.8	38	48	01	04	37	59	01	03					
9.0	37	57	01	03	37	11	01	01					
9.2	37	09	01	01	36	25	01	00					Maximum value for the manual mode.

- The recording duration listed above is reference only. Not guaranteed.
- The recording duration applies to the initialized HDD/DVD-RAM which will record continuously (HDD which will repeat 8 hours recording). The display may vary depending on the disc.
- If you subtract the actual recording duration from the duration listed in this table, the calculated time period does not represent the remaining time.
- The consumption of space may vary depending on the picture and sound conditions of the recorded content.
- Use the remaining disc space display feature to see the remaining space in the HDD and DVD-RAM disc.
- If a number of recorded titles reaches the maximum (HDD: 396, DVD-RAM: 99), no more recordings are possible even if the recording duration remains.

For DD D /M1 and DD D /M2, the digital recording technology for consumer products of Dolby Laboratories is used. Setting 1 (DD D /M1) records in Dolby Digital at 192 kbps, and Setting 2 (DD D /M2) records at 384 kbps.

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Language code list

Table of languages and their abbreviations

Abbreviation	Language
– – –	No alternate language
CHI (ZH)	Chinese
DUT (NL)	Dutch
ENG (EN)	English
FRE (FR)	French
GER (DE)	German
ITA (IT)	Italian
JPN (JA)	Japanese
KOR (KO)	Korean
MAY (MS)	Malay
SPA (ES)	Spanish
AA	Afar
AB	Abkhazian
AF	Afrikaans
AM	Amharic
AR	Arabic
AS	Assamese
AY	Aymara
AZ	Azerbaijani
BA	Bashkir
BE	Belorussian
BG	Bulgarian
BH	Bihari
BI	Bislama
BN	Bengali, Bangla
BO	Tibetan
BR	Breton
CA	Catalan
CO	Corsican
CS	Czech
CY	Welsh
DA	Danish
DZ	Bhutani
EL	Greek
EO	Esperanto
ET	Estonian
EU	Basque
FA	Persian
FI	Finnish
FJ	Fiji
FO	Faroese
FY	Frisian
GA	Irish
GD	Scottish gaelic
GL	Galician

Abbreviation	Language
GN	Guarani
GU	Gujarati
HA	Hausa
HI	Hindi
HR	Croatian
HU	Hungarian
HY	Armenian
IA	Interlingua
IE	Interlingue
IK	Inupiak
IN	Indonesian
IS	Icelandic
IW	Hebrew
JI	Yiddish
JW	Javanese
KA	Georgian
KK	Kazakh
KL	Greenlandic
KM	Cambodian
KN	Kannada
KS	Kashmiri
KU	Kurdish
KY	Kirghiz
LA	Latin
LN	Lingala
LO	Laotian
LT	Lithuanian
LV	Latvian, lettish
MG	Malagasy
MI	Maori
MK	Macedonian
ML	Malayalam
MN	Mongolian
MO	Moldavian
MR	Marathi
MT	Maltese
MY	Burmese
NA	Nauru
NE	Nepali
NO	Norwegian
OC	Occitan
OM	(Afan) Oromo
OR	Oriya
PA	Panjabi
PL	Polish
PS	Pashto, pushto

Abbreviation	Language
PT	Portuguese
QU	Quechua
RM	Rhaeto-romance
RN	Kirundi
RO	Rumanian
RU	Russian
RW	Kinyarwanda
SA	Sanskrit
SD	Sindhi
SG	Sango
SH	Serbo-croatian
SI	Singhalese
SK	Slovak
SL	Slovenian
SM	Samoan
SN	Shona
SO	Somali
SQ	Albanian
SR	Serbian
SS	Siswati
ST	Sesotho
SU	Sundanese
SV	Swedish
SW	Swahili
TA	Tamil
TE	Telugu
TG	Tajik
TH	Thai
TI	Tigrinya
TK	Turkmen
TL	Tagalog
TN	Setswana
TO	Tongan
TR	Turkish
TS	Tsonga
TT	Tatar
TW	Twi
UK	Ukrainian
UR	Urdu
UZ	Uzbek
VI	Vietnamese
VO	Volapük
WO	Wolof
XH	Xhosa
YO	Yoruba
ZU	Zulu

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Specification

■ Power requirement during operation
34W

■ Power requirement at standby
25.7W

■ Power supply
230V AC, 50/60 Hz

■ Mass
6kg

■ External dimension
Width 430 x Height 69 x Depth 316mm

■ Tuner
System: Frequency synthesizer
Channel coverage:
PAL I VHF: A-J, 11, 13, E2-E12
UHF: E21-E69
CATV: X, Y, Z, S1-S41, 1-53
(48MHz to 464MHz, 8MHz steps)

■ Aerial input/output terminal
VHF/UHF: 75Ω, IEC Connector

■ Signal system
Standard PAL Colour TV system

■ Laser
Semiconductor laser, Wavelength: 650nm/780nm

■ Format
DVD-VR format
DVD-Video format

■ Image recording system
MPEG2

■ Sound recording system
Dolby Digital M1, M2, Linear PCM

■ VIDEO input
1.0Vp-p (75Ω), Sync signal negative,
Pin jack x 1 system, 1 in front
SCART socket x 2 at rear

■ VIDEO output
1.0Vp-p (75Ω), Sync signal negative,
Pin jack x 1 system, 1 at rear
SCART socket x 2 at rear

■ S-VIDEO input
(Y) 1.0Vp-p (75Ω), Sync signal negative,
(C) 0.286Vp-p (75Ω)
SCART socket x 1 at rear

■ S-VIDEO output
(Y) 1.0Vp-p (75Ω), Sync signal negative,
(C) 0.286Vp-p (75Ω), 1 at rear
Mini DIN4 Pin x 1 system
SCART socket x 1 at rear

■ COMPONENT output (Y, P_B, P_R)
Y output (green), 1.0Vp-p (75Ω),
Sync signal negative, Pin jack x 1 system
P_B, P_R output (blue, red), 0.7Vp-p (75Ω),
Pin jack x 1 system each

■ RGB output
(R) 0.7Vp-p (75Ω)
(G) 0.7Vp-p (75Ω)
(B) 0.7Vp-p (75Ω)
SCART socket x 1 at rear (AV1 only)

■ AUDIO input
2.0V (rms), 22kΩ or above, pin jack
(L, R) x 1 system
1 in front
SCART socket x 2 at rear

■ AUDIO output
2.0V (rms), 2.2kΩ or below, pin jack
(L, R) x 1 system
2 at rear
SCART socket x 2 at rear

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■ DIGITAL AUDIO OUT COAXIAL jack

0.5Vp-p (75Ω), pin jack x 1 system

■ Remote control

Wireless remote control (SE-R0207)

■ Operating conditions

Temperature: 5°C ~ 35°C,
Position: Horizontal

■ Clock display

24 hour digital display

■ Clock accuracy

Quartz (monthly deviation: approximately ±30 seconds)

■ Supplied Accessories

- Remote control 1
- Batteries (R03) 2
- Coaxial cable 1
- Video/Audio cable 1
- OWNER'S MANUAL (INSTALLATION GUIDE) 1
- OWNER'S MANUAL (OPERATIONS) 1
- Quick Reference 1

- This model complies with the specifications above.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.
- The illustrations used in OWNER'S MANUAL are for reference purposes only. Because the illustrations used in OWNER'S MANUAL are simplified for easy recognition, they may vary slightly from the unit's actual screen displays or figures.

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Memo

Memo